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ABSTRACT

This report determines the congruence between the designs of the ESEA Title I and Impact Aid Programs and the actual implemented products, and also assesses the worth of these programs in terms of their outcomes. The aims and purposes of programs relating to the strengthening of verbal (including bilingual) and mathematical skills among elementary and junior high school students are discussed: observed programs are described: and evaluations are presented. Recommendations are included for each area and the report is buttressed by pretest and posttest scores which aid in evaluating the effectiveness of the programs. Tables are included. (WP)

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FINAL EVALUATION REPORT
SCHOOL YEAR 1977/78

PART I : ESEA Title I
PART II : Impact Aid Programs

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Errata Sheet

Final Evaluation Report
School Year 1977/78

Part I: ESEA Title I

Part II: Impact Aid Programs

1. Page 36: Last paragraph, first sentence should read.

   "The participants included 72 students in grades K through 2."

2. Page 89: Last paragraph, fifth sentence should read.

   "A need seemed to exist for occasional separate sessions for the educational assistants..... greater participation on their part."

3. Page 139: Program name should read.

   N. Augmentation of Bilingual Language Lab (B/E 5045-8-8755)

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New York City Board of Education
501 Courtlandt Avenue
Bronx, New York 10451

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Final Evaluation Report
1977--1978

Part I ESEA Title I Programs
BE #: 5045-8-1650

Part II Impact Aid Programs
BE #: 5045-8-8750

Report Prepared by:
Aida Price
Coordinator of Evaluation

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I. Introduction

The purpose of this evaluation was twofold: (1) to determine the congruence between the program design and the implemented product; and (2) to assess the worth of the program in terms of its outcomes. The first of these purposes was served through descriptive comparisons between the proposed design and the observed program. The second purpose was primarily served through summative data analysis and secondarily through expert opinion.

A team of nine consultant evaluators were utilized for the purpose of conducting classroom observations, and teacher, principal, paraprofessional, coordinator, family-assistant, student and parent interviews.

During the period from April to June, 1978, each Title I and Impact Aid program was observed and field visits were made in which classes were observed and students and staff interviewed.

The following report is a summary of the impressions of the evaluators as these relate to the fulfillment of the goals and objectives of each program.

The data on which the conclusions of the report were based were gathered through standardized tests, observations and interviews at 24 school sites. The format of the report contains: (1) a brief description of the proposed program, (2) a description of the observed program, (3) objectives and the statistical analysis of pre- and post-test scores, which assesses the fulfillment of program objectives, (4) recommendations and (5) conclusions.

The consultant evaluators responsible for the site visits, interviews and initial reports include the following:

Ray Agostini
Winifred De Loayza
Estelle Lerner
Luberta Mays
Julius Rosenthal
Helene Silverman
Richard Sinatra
Diane Sperber
Nancy Ayala Vazquez

A special note of appreciation to Dr. Kenneth Berger who conducted the computer analysis of data for the evaluation.

II. Program Findings

A. Strengthening Early Childhood (B/E 5045-81652)

1. Description of the Proposed Program

This program was to provide pupils in grades K-2 English Reading, Bilingual Methodology and ESL and Language Development that is supplemental to the tax-levy development program.

Each reading paraprofessional (in English or Spanish Arts) was to work with small groups of children (4-5) per group, 5 times a week) for 30-40 minute periods (depending upon the attention span of children and the activity used) in the classroom.

The educational assistants were to engage in an "experimental activity-oriented learning program" in reading and language activities using hands-on materials cognitive games, experience charts, language experience techniques, A.V. materials, games prepared at para-professional workshops, trade books, and kits.

The Language Arts skills, to be stressed at the kindergarten level, were to include oral language, auditory perception, visual perception and motor-perception; while at Grades 1 and 2, the skills were to include oral language development for comprehension and concept, word attack skills, comprehension and word study.

The ESL and Language Development Component was to utilize a language development resource room to provide the four basic communication skills listening, speaking, reading and writing for children in kindergarten, grades 1 and 2 with limited English language ability. There was to be 3 language periods a day of approximately 45 minutes to 1 hour for a total of 15 periods a week. Each child was to receive a minimum of 3 periods a week of instruction. Approximately 75 children were to participate in the program. Fifteen (15) children were to be scheduled per group. These activities were to be scheduled in the morning.

Implementation of the program was to require sixteen Resource Teachers, 98 Educational Assistants, two Auxiliary Trainers, one Coordinator of ESL and one Coordinator of Paraprofessionals and one Senior Typist.

The overall supervision of the program was to be provided by the District Supervisor of Early Childhood.

The paraprofessional staff was to receive 36 hours of in-service training during the school year. These

in-service training sessions were to be jointly conducted by the Early Childhood Resource Teachers as well as the two Coordinators and the District Supervisor of Early Childhood.

2. Description of the Observed Program

The consultant evaluators visited nine of the fifteen Strengthening Early Childhood schools, and observed instruction in the lab as well as classroom setting in order to assess the program objectives.

The Strengthening Early Childhood instructional facilities consisted of the resource room, the classroom of participating teachers and an office for the resource teacher.

Lab or resource room facilities were indeed excellent. The rooms were equipped with language development kits, games, (commercial and teacher made expressive arts material for drama and puppetry)and a full complement of multi-media equipment. The teachers in this program were extremely ingenious in designing materials to meet specific needs of the children in the program. All of the materials were high interest and generally "hands on" in order to encourage maximum involvement.

The materials in the resource room were highly accessible to the children. The resource rooms were brightly decorated with the children's work, materials, and art displays.

The resource room was used by all the educational assistants and the resource teacher as a resource and material center. The resource room was organized as a lab with learning centers to teach English as a second language. The resource teacher and two E.S.L. educational assistants worked in the lab. The bilingual educational assistant worked in the back of the classrooms to which they were assigned. Materials in the classroom were not as abundant nor varied as those found in the resource room. Paraprofessionals generally worked in small corners of the classroom using materials from the resource room.

The staff for the Strengthening Early Childhood Program consisted of two coordinators (ESL and Paraprofessional), sixteen resource teachers, ninety-eight educational assistants and two auxiliary trainers. The supervision was done by the tax-levy person (interim) in charge of supervising early childhood components for the entire district. In each of the schools the schedules of the staff were in prominent display.

The instructional activities took place under the supervision and guidance of the early childhood resource teachers. They guided the paraprofessionals assigned to the resource room in implementing, reinforcement and follow-up activities with small groups of children.

Each reading paraprofessional (in English or Bilingual Methodology) worked with small groups of children (4-5 per group, 5 times a week) for 30-40 minute periods (depending upon attention span of children and the activity used) in the classroom.

The Early Childhood Resource Teacher spent half of her time in the language Development Resource room working with small groups of the participating population and guiding the paraprofessionals in their small group instruction. She concentrated on language structures and vocabulary development. The balance of her time was spent in coordinating activities, such as testing, scheduling, supervising, and conducting training of educational assistants, ordering supplies, maintaining pupil progress records at the school level. Under the supervision of the interim District Early Childhood Supervisor, the Coordinator of ESL conducted an in-service training session for resource teachers and paraprofessionals, in the areas of ESL and language development (both English and Spanish) and reading in Spanish, served as a resource to the Bilingual Methodology paraprofessionals, visited language development rooms and served as a resource to the staff, and assisted with various administrative aspects of the program.

Under the supervision of the Interim District Early Childhood Supervisor, the Coordinator of Paraprofessionals conducted in-service training programs for classroom paraprofessionals, trained and supervised the auxiliary trainers, conducted some of the training sessions for the paraprofessionals at the schools, visited classrooms to serve as resource to paraprofessionals, disseminated information to schools regarding administrative procedures related to paraprofessionals; served as the liaison between the schools and the Auxiliary Career Unit of the Board of Education, and assisted with administrative aspects of the program.

Staff training was conducted in the district office as well as in the school setting. Staff schedules received reflected various patterns of training at particular schools. In some schools planning sessions were held several afternoons per week from 2:10 to 3:00 pm. A great deal of training took place as the district coordinators worked with the paras within the classroom.

Training workshops were held weekly; sometimes in the district office. Some of the staff felt that the training was extremely theoretical.

The training was, however, directly related to needs of the children targeted for the program.

The training sessions were geared mainly toward the paraprofessional. The paraprofessional training sessions were separate from those of the resource teacher. Some of the resource teachers did stay in the room while the paraprofessional training session was being held; they did not actively involve themselves in the activities.

The paraprofessional staff received 36 hours of in-service training during the school year. These in-service training sessions were jointly conducted by the two coordinators and the District Supervisor of Early Childhood. The training sessions focused on demonstrations of techniques to be used in working with small children, materials to be used, how to develop and prepare materials and theoretical background information about early childhood philosophy. The paraprofessionals in the program have many years of experience working in the school system. They were very dynamic, efficient and talented. Some of the material presented in the training had previously been presented to them.

The resource teachers meetings emphasized administration of program, such as testing, record keeping and coordination with other school programs and staff. New materials were demonstrated by vendors, new techniques and materials discussed.

Supervision of the resource teachers and the paraprofessionals in the school was done by the principal or assistant principal in charge of early childhood grades. The supervision was both formal and informal. The resource teacher and paraprofessional were both observed and evaluated. Several observations were done during the school year. The evaluation was done at the end of the school year. The overall supervision of the program was provided by the interim District Supervisor of Early Childhood.

The children were identified by means of the following testing procedures. The children were tested in October 1977 using the L.A.B.) Language Assessment Battery to identify their language dominance for the E.S.L. component. The reading component used the Boehm Test of Basic Concepts for kindergarten. English monolingual children in first grade were tested with the Clymer Barrett and in the second grade with the S.A.T.. Children in Bilingual Methodology were tested with the (L.A.B.) Language Assessment Battery. Records and lists of participating children were kept in order and were available for inspection. Seventy five children from grades Kindergarten to second, in each school, were serviced by the ES.L. component. The Language Arts Program in Spanish had two classrooms in each school with an average of 30 students in each classroom. Some schools had a high attrition rate which affected the program population. The mobility of the population kept the school register in a state of flux.

a. Reading Component

The English Reading Component served approximately 1300 students in grades K-2. A "hands on" activity oriented approach was conducted primarily by educational assistants with four to five children five times per week for 30-40 minute sessions.

Early Childhood skills such as auditory and visual discrimination, and psycho-motor skills were stressed through use of multi-media, games to develop cognition, reading and language games, experience charts, teacher-made-materials and commercial kits.

The assigned resource teacher assisted in planning, and supervising the lessons taught by the paraprofessionals.

While some instruction utilized games and puzzles, other lessons involved use of such structured materials as Distar and reading worksheets. One of the resource teachers had indexed reading and reading related kits to correspond with kindergarten and early childhood units such as family, food and community helpers.

Teacher made language games, emphasizing auditory and visual perception and reading kits (commercial) as well as commercial games were used in predominance in kinder-garten and grade one.

In situations involving games, paraprofessionals were sitting with the children and interacting in a positive manner. Puppetry was used in one school and children were developing in oral language through puppetry without anxiety. One group of children was involved in a game stressing structure of the English language and was unaware that they were mastering roots, prefixes, suffixes and structural analysis.

There was evidence of on-going assessment with questions and answers being a part of each lesson.

One advantage of being housed in a tax-levy classroom is that the tax-levy teacher was aware of lessons taught and approach used. It was then possible to reinforce concepts developed.

5. ESL Component & Spanish Language Arts

The Strengthening Early Childhood Program was implemented in September according to the proposal. Approximately 1,660 students in grades K through 2 were served by this program.

For the reading activities in the Bilingual Methodology component, the educational assistants worked with 4 or 5 students per group for 30-40 minute periods within the classroom setting reinforcing reading skills taught by the classroom teacher (tax-levy). The educational assistants used a variety of materials to implement the experiential activity-oriented learning program in reading and language activities. Each school, through the resource teacher, ordered their own instructional materials, which contributed to individualized and unique programs amongst the schools.

Reading activities in both English and Spanish were used to supplement the tax-levy developmental program which was based on the basal-reader approach.

The bilingual paraprofessional instructional activities were as varied as were the materials. The group consisted of 5 children who met with the educational assistant in a corner in the back of the room. The activities were well planned and the materials interesting. The majority of the materials were made by the paraprofessionals. They represented a very extraordinary amount of creativity and talent. The educational assistants were aware of the progress of the children and to that effect re-grouping was done frequently. Extra time was given to the children who lagged behind because of absenteeism or slow learning process.

For ESL, students were escorted from their classrooms to the Language Development Resource Room where instruction of basic communication skills (listening, speaking, reading, and writing) took place. The instructional activities were conducted under the supervision and guidance of the S.E.C. Resource Teacher who guided the educational assistants assigned to the room. The major portion of the ESL lesson was done by the SEC Resource Teacher with follow-up activities completed by the Educational Assistants as children progressed through the various learning centers (listening, games, creative arts, reading and writing).

The skills stressed at the kindergarten level included language, auditory perception, visual perception and motor perceptual. The skills stressed at Grade 1 and 2 include oral language development for comprehension and concept, word attack skills, comprehension and word study. The ESL and Language Development Component utilized a language development resource room to provide the four basic communication skills - listeing,speaking, reading and writing for children in kindergarten, grades 1 and 2 with limited English language ability.

There were 3 language periods a day of approximately 45 minutes to 1 hour for a total of 15 periods a week. Each child received a minimum of 3 periods a week of instruction. Approximately 75 children participated in the program. Fifteen (15) children were scheduled per group. These activities were scheduled in the morning. In some schools, a group was scheduled in the afternoon. because of the organizational pattern of the school (lunch period, etc.). In one school the language development resource room emphasized reading remediation activities with the concomitant development of the other basic communication skills since this school had a large reading participating population with few children in need of ESL techniques. However, ESL instruction was given to those children who were in need of it.

The materials used by S.E.C. component were very varied, appropriate and stimulating. The lab was organized in learning centers. Each center was well equipped Some of the available materials included commercial programs: C.O.R.E., I.M.L., Peabody Language, Distar Language, Swirl Lancaster, Miscellaneous Materials: Camera, Telephone, Cassette Player & Tape, Pictures & Posters, Manipulative Games and Materials, Cooking Utensils, Tutorette Player, Viewers and Filmstrips, Math Manipulative Materials, Science Manipulative Materials, Puppets and Puppet Theatre, Records. The bilingual paraprofessionals needed more games and textbooks to supplement the ones available. There was more material produced in English than in Spanish. The Resource teacher needed more information about appropriate material in Spanish and places where to obtain them. The classroom teachers, paraprofessionals and Resource Teachers made good use of all the material. The materials created by them were innovative.

3. Program Objectives and Data Analysis

1. Reading Component

(a) The children in kidergarten made a significant gain (p=.05) in pre-reading skills as measured by the Boehm Test of Basic Concepts.

(b) The children in Bilingual Methodology (Kindergarten) made a significant gain (p=.05) in pre-reading skills as measured by the Boehm Test of Basic Concepts.

The participating population included 210 children in English reading 53 children in Bilingual Methodology. All participants were pre-tested in October 1977 and post-tested in May, 1978. Data was analyzed according to the procedures described using the norm referenced Model A-1 (real post vs. anticipated gain design using normal curve equivalent scores). (see Tables 1 & 2).

(c) English monolingual children in Grade 1 made a significant gain (p=.05) in total reading as measured by the Clymer Barrett Pre Reading Battery.

The participating population included 344 children. All students were pre-tested in October 1977 and post-tested in May 1978. A t-test for correlated means was used to measure the significance of the difference (see Table 3).

(d) English monolingual children in grade 2 made a significant gain in reading beyond expectation (p = .05) as measured by the Stanford Achievement Test.

The participating population included 500 children in grade 2. All participants were pre-tested in October 1977 and post-tested in May 1978. Data was analyzed according to the procedures described using the norm referenced model A-1 (real post vs. anticipated gain design using normal curve equivalent scores). (See Table 4).

(e) The 549 children who participated in the Bilingual Methodology Component (K-2) demonstrated achievement in language arts (English) (p=.05) as measured by the New York City Language Assessment Battery and its sub-tests. A t-test for correlated means will be used to measure the significance of the difference.

The participating population (K=53, Grade 1 = 209, Grade 2=138) were pre-tested in October 1977 and post-tested in May, 1978. A t-test for correlated samples was used to measure the significance of the difference for the 4 sub-test scores, while the total score was analyzed according to the procedures described using the norm referenced model A-1 (See Table 5 for sub-test results; and Table 6 for total score results) design.

TABLE 1

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Boehm Test of Basic Concepts
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
K	210	22.7	14.3	44.5	23.0	10	40	14.42

TABLE 2

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Boehm Test of Basic Concepts
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
K	53	29. 2	3.6	43.1	17.1	16	37	4.64

TABLE 3

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Clymer Barrett Pre-Reading Battery Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
1	344	50	20	85	21	38.32

TABLE 4

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	500	23.7	13.2	29.0	14.8	11	16	8.85

TABLE 5

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	K	53	8	6	14	5	8.30
	1	209	10	6	16	4	18.02
	2	138	15	4	18	2	9.89
Reading	K	53	1	1	2	2	7.13
	1	209	1	1	2	3	9.75
	2	138	2	2	5	3	12.26
Writing	K	53	1	1	2	2	5.87
	1	209	2	1	4	2	14.86
	2	138	3	2	7	6	7.20

TABLE 6

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
K	53	10.7	13.3	31.9	29.0	3	20	6.03
1	233	9.1	14.0	20.0	21.3	3	8	10.68
2	144	8.9	11.8	24.2	22.9	3	11	10.55

TABLE 7

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
K	134	6.4	10.4	33.0	28.5	2	21	11.77
1	400	5.3	8.2	20.9	20.1	2	8	16.76
2	312	6.5	7.9	27.7	25.3	2	14	15.94

2. ESL Component

K, 1 and 2 children made a significant gain (p=.05) beyond expectation in English oral ability as measured by the Language Assessment Battery in normal curve equivalent scores.

The participating population (K=134, Grade 1=400, Grade 2 = 312) were pre-tested in October 1977 and post-tested in May 1978. Data were analyzed according to the procedures described using the norm referenced model A-1 design (See Table 7) .

4. Recommendations

a. It is recommended that the tax-levy classroom teacher engages in joint planning with the paraprofessionals assigned to their room, and wherever possible joint training sessions be given to insure continuity and implementation of goals and techniques.

b. It is recommended that expertise in teacher-made games be shared with other resource teachers and paraprofessionals.

c. It is recommended that staff (resource teachers) and paras train together at times in order to become aware of each others needs and keep abreast of instruction provided for each group. Follow-up activities to insure the implementation of some of the training ideas and techniques are necessary.

d. It is recommended that reinforcement be given to the para-professional in the preparation of appropriate materials, lesson preparation and how to organize by difficulty of tasks.

5. Conclusions

The Strengthening Early Childhood program has been efficiently and effectively implemented according to the Title I proposal. The program is one of an "experiential activity oriented learning program" where the educational assistant reinforces teacher directed reading activities with small groups of 4 or 5 students. This type of small group approach to reading affords the educational assistants the opportunity to provide individualized instruction.

The Strengthening Early Childhood program is an overall excellent, supplemental program for ESL, Bilingual and English speaking children.

B. Developmental Learning Program (5045-81653)

1. Description of the Proposed Program

The Developmental Learning Program was designed for children of average potential who have difficulty in processing information through visual and auditory channels and/or lack gross or fine motor control. Thus, the goal of the program was to significantly improve the reading and mathematics skills of these learning disabled children.

The proposal called for a Developmental Learning Teacher and a Developmental Learning Paraprofessional for each site, and a Program Coordinator.

The proposal mandated that 360 children in grades 1-4 be served by the program. The plan stated that children should be selected through diagnostic testing. The mandated sequence of tests included an initial screening test, the Prior Evaluation Instrument for Perceptual Development and tests of Evaluation Instrument for Perceptual Development and tests of academic achievement. Once testing had been completed, the proposal stated that high or low functioning, homogeneous groups of students be formed on the basis of their functional problems--visual, auditory, mixed and/or multi-sensory. Each of these groups were not to exceed four students and these four students were to be instructed for 45 minutes, three times a week. After each session student progress was to be evaluated for the purpose of modifying the curriculum or instruction.

Essentially, the Developmental Learning Program was planned to be a highly individualized diagnostic/prescriptive reading and mathematics program employing instructional techniques aimed at helping children with developmental learning problems.

2. Description of the Observed Program

a. Reading Component

Five Developmental Learning Program sites were visited to observe the implemented program. Each of these program sites was housed in a large, well equipped room which provided sufficient space for several study groups to work comfortably at the same time. For the most part, these rooms were located in a quiet area of the school.

As mandated by the proposal, each site had a Developmental Learning Teacher and a Developmental Learning Paraprofessional. These direct contact personnel were coordinated by a Project Coordinator.

The Project Coordinator was a trained school psychologist who had specialized in learning disabilities. His interview revealed that he spent 10% of his time maintaining records; 20% of his time screening students; 5% of his time conducting meetings and 65% of his time performing differential diagnosis and conducting on-site staff development with teachers and paraprofessionals. He has concentrated his efforts in developing his staff's capabilities in the area of developmental learning and has left the selection of reading curriculum to the discretion of the teachers.

Interviews with teachers and principals indicated that he has performed the coordination role as outlined in the proposal to their satisfaction.

Most of the Developmental Learning Teachers who were visited also appeared to be academically prepared for their positions. In addition, most had several years of experience in this program. These professionals concentrated their efforts on planning instruction, coordinating the program, and teaching and evaluating students.

The interviews with the Developmental Learning Paraprofessionals revealed that, as a group, these aides were well educated, highly trained, effective aides. The interrelationship between the paraprofessionals and teachers evinced a positive team spirit. Each instructional team had worked out an acceptable division of labor based upon the particular strengths and weakness of the team members.

Several vehicles were used to train these staff members. The Program Coordinator planned and executed an orientation session at which the program objectives, mandates, and expectations were fully explained. Next, the Program Coordinator planned a limited number of conferences at which both teachers and paraprofessionals were invited. In addition, released time was provided on a regular basis for teachers and paraprofessionals to participate in intervisitations among sites and field visits to exemplary programs out of the district. Finally the Project Coordinator made a scheduled weekly visit to each site for the purpose of providing on-site training.

The interviews with paraprofessionals and teachers indicated that limited formal training took place during this year. They attended at least two presentations; one on class analysis and another by an author of a commercially available learning disabilities program. Similarly, limited use was made of the resource period for intervisitations among peers. However, these experienced teachers had been visited by teachers who were newer to the program. Perhaps the training vehicle most utilized by these teachers and paraprofessionals was the on-site visits by the Program Coordinator.

While teachers and paraprofessionals felt satisfied by their level of training they expressed regret that the training aspects of the program had been curtailed in 1977-78 as compared with previous years.

The program was supervised on site by the Assistant Principal and by the Program Coordinator. In each case the school administrator and the Program Coordinator were satisfied with the performance of both teachers and paraprofessionals in the program.

Each program site selected forty-five 1st, 2nd, 3rd and 4th graders who were underachieving because of diagnosed learning disability. These children were initially organized into instructional groups according to their functional retardation and scheduled for 45 minutes of instruction three times a week.

At each site program enrollment had dropped because of attrition and regular attendance appears to be somewhat sporadic. No site had more than six children and some sites had as few as three students during the observation period. Apparently, the remaining students were absent. Nonetheless, teachers asserted that forty-five students taxed their capabilities to provide adequate instruction.

Diagnostic information was available for every student and group logs were kept for each class period. One teacher kept achievement records for each child. However, it appeared that group composition resulted from similarities in reading and mathematics achievement rather than similarities in functioning disabilities. Visual-auditory, kinesthetic and tactile methods were employed regardless of the diagnosis. Essentially, students were evaluated on their ability to master the reading curriculum not on their ability to compensate for their specific developmental difficulties.

The verbal and non-verbal communications among teachers and children, and paraprofessionals and children was, for the most part, success oriented. Students were positively reinforced for correct responses and incorrect responses were corrected with a supportive attitude

The instructional activities seemed to be focused on the production of teacher behavior, rather than student response. The teachers were very active in the production of language but the students were reinforced for tag answers and/or non-verbal responses. Student "languaging" was not encouraged. Furthermore, creative responses were negatively reinforced rather than positively reinforced. For example, flash cards were used to elicit the sounds of initial consonants. The figures on these cards often had several different names; some names began with the desired consonant sound and some names began with different sounds. When children made the deviant but correct response they were corrected without recognition of the appropriateness of their response.

The curriculum, or intended learning outcomes for this program were not explicitly stated in a general set of behavioral objectives. Each site used a different set of implicit behaviors to guide instruction. Generally, however, it appeared that the children were taught to recognize and produce the names and sounds of the letters of the alphabet on cue and the basic mathematical facts. Comprehension appeared to be incidental as an outcome.

The materials used by the children in the Developmental Learning Program were both commercially available and teacher made. They used flash cards, ditto sheets, salt tracing boxes, clay, paint, teddy bear counters, cubes, rice, yarn, etc.; some sites employed balance beams. There were no sites where audio-visual machines, such as phonographs, language masters, and/or tape recorders were used. Teachers and paraprofessionals were relatively content with the materials at their disposal. Nonetheless, one teacher expressed a desire for a lending library for her students; while another wanted a language master.

The Developmental Learning Program was relatively autonomous with respect to the remainder of the school. Children were released to the program from the classroom. Classroom teachers were informed about the progress of each child during informal information exchanges which took place when children were picked up or delivered; and/or during lunch or free periods. Developmental learning teachers and paraprofessionals reported that some classroom teachers modified their instruction with these children as a result of these interchanges. No one knew whether these early childhood paraprofessionals modified their instruction to meet the specific needs of these children.

In some schools these children are impacted by three programs: the Developmental Learning Program, the Early Childhood Program and an Early Childhood Lab Program. Teachers seemed concerned that some coordination among these programs take place less the children be confused by the proliferation of methodologies.

Teachers and paraprofessionals reported that they had at least one parent workshop this year. These parent workshops attempted to inform the parents about the program and to teach the parents instructional techniques which might be used at home to further the child's achievement in reading and mathematics. In addition, the teachers and paraprofessionals reported that they had informal contact with parents who visit the school.

b. Math Component

In most cases mathematics was not scheduled to be taught separately but was taught in conjunction with reading. The problem of this integrated approach to the teaching of reading and mathematics is that in many cases an insufficient amount of time is spent on mathematics. This is indeed what happened here. Teachers felt that the childrens' difficulties with reading were so pronounced that they had to devote a major part of their time with the children to reading or pre-reading activities.

Typical activities in mathematics that were done with these children included work with sets, number recognition, counting, money and simple arithmetic facts. There was a good selection of commercial and teacher-made manipulative materials. The labs were attractively decorated and provided an excellent environment for pupils and staff to work together.

The program coordinator visited each lab at least once every two weeks and worked with the teacher on diagnostic and teaching problems. Once a month all the lab personnel met together with the coordinator to work on practical and educational aspects of the program. No special attention was focussed on the mathematics component of the program during these meetings although some discussion on this, of course, did take place.

3. Program Objectives and Data Analysis

All participants were pre-tested in October, 1977 and were post-tested in May, 1978. Data was analyzed according to USOE evaluation Model A-1, and reported separately by grade level.

Reading

1. In reading letters and sounds the first grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the Stanford Early School Achievement Test (SESAT), Part 3 - Letters and Sounds (See Table 8).

2. In reading letters and sounds and reading words, the second grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SESAT - Part 3 - Letters and Sounds and Part 5 - Word Reading (See Table 9).

3. In reading and word study skills, grade 3 participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the Stanford Achievement Test (SAT) (Primary Level I) Reading - Part A, Word Study Skills. (See Table 10)

4. In vocabulary, reading, and word study skills, grade 4 participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SAT (Primary Level I) Vocabulary, Reading - Part B, Word Study Skills. (See Table 11).

Mathematics

1. In total mathematics participating first grade children with few skills demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by SESAT Math subtest. (See Table 12.

2. In total mathematics second grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SESAT - Math subtest. (See Table 12).

TABLE 8

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. LearningProgram by Grade Level

(Name of Test: Stanford Early School Achievement Test
Letters & Sounds Sub-test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
1	131	48.5	20.3	73.9	15.8	47	87	13.19

TABLE 9

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. LearningProgram by Grade Level

(Name of Test: Stanford Early School Achievement Test Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Letters & Sounds	2	113	41.4	17.3	66.4	24.5	34	59	11.34
Word Reading	2	113	53.7	19.8	61.8	25.8	57	71	3.57

TABLE 10

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. LearningProgram by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Reading	3	60	47.4	14.2	67.1	24.1	45	79	6.62
Word Study Skills	3	60	46.0	15.5	66.1	20.2	42	78	8.40

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TABLE 11

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. Learning Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Reading	4	13	33.1	16.1	55.3	12.9	21	60	4.76
Word Study Skills	4	13	38.4	22.4	51.2	13.1	29	52	1.69

TABLE 12

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. Learning Program by Grade Level

(Name of Test: Stanford Early School Achievement Test
Math Sub-test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
1	131	38.8	16.1	72.2	21.9	30	85	17.56
2	113	44.2	21.2	70.0	27.1	39	83	10.57

TABLE 13

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. Learning Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Math Concepts	3	60	35.9	14.6	70.0	19.9	25	83	15.80
Math Computations & Applications	3	60	42.4	11.8	70.9	20.7	36	84	12.18

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TABLE 14

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. LearningProgram by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Math Computations	4	13	47.7	23.6	62.9	21.8	46	73	2.57
Math Applications	4	13	37.4	14.3	53.0	17.0	28	56	3.44
Math Concepts	4	13	33.2	13.3	64.8	18.6	21	76	8.51

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3. In math concepts, computation and applications, third and fourth grade participants demonstrated achievement beyond expectation ($p=.05$) in normal curve equivalent units as measured by the SAT (Math Concepts, Math Computation and Applications subtests). (See Tables 13 and 14).

4. Recommendations

The recommendations for this program are both general and specific. In a general sense this is a well run program which should be re-funded. However, there are specific areas where program improvement could be effected.

a. It is recommended that a uniform reading curriculum should be developed and used at improving reading. This curriculum should emphasize reading for meaning.

b. It is recommended that training sessions be offered in reading comprehension. Particular emphasis should be placed on psycholinguistics and its relationship to the instruction of the child.

It is further recommended that some training sessions be devoted to mathematics. The teachers need to know the best ways of using the available materials. For the more advanced children, they also need to see how these activities tie in with the regular mathematics program.

c. It is recommended that every effort should be made to contact parents by phone, mail and visitation on a regular basis.

d. It is recommended that coordination among these programs on a district-wide basis be implemented since these children are impacted by several programs.

e. It is recommended that the program employ audio-visual devices for drill and use teachers for language and cognitive development since language usage is a key to intellectual development.

f. It is recommended that a specialist in elementary mathematics education work together with a special education specialist from the Developmental Learning Program to help formalize a mathematics sequence for the program. Regular mathematics textbooks are not appropriate for this program since a special selection and sequencing of material is called for. Expert mathematical guidance is essential to support the teacher's efforts. A conceptual framework in mathematics that has been developed especially for these children is needed if each child is to progress to the maximum of his or her potential.

g. It is recommended that time be set aside for the teachers to meet and share with each other math teaching strategies that have worked well for their children.

In one of the labs the paraprofessional and the teacher set up a play store with interesting activities to help the children develop and practice basic notions about money and how it is used. This type of activity could be useful in some of the other labs.

5. Conclusions

The Developmental Learning Programs has been implemented according to the design oulined in the proposal. The program staff did the job it proposed to do in the way they proposed to do it.

The program had several strengths which include the following:

a. The program is housed in excellent facilities, is success oriented and demonstrates high morale among its staff.

b. The program provided children with continuous, individual attention from warm, supportive adults.

c. The program was reportedly effective in helping children develop a positive self-image as learners.

d. The program provided the mechanism for effective professional growth for teachers.

e. The program provided strong coordinative services to program sites and participating schools.

f. The program served a specific target population, who without additional help, would have fallen behind their classmates at an ever accellerating rate.

In addition, the small teaching groups in the Developmental Learning Program with their opportunities for individual guidance at all times provided an extremely effective environment for learning and should be refunded.

C. Special Primary 31 (5045-8-1654)

1. Description of the Proposed Program

The Special Primary Program was established to integrate with the greater schoolwide programs, and to provide staff who were to concentrate on supplementing the reading, language, ESL and mathematics skills for participating pupils.

Title I personnel were to be assigned to "pull out" participating pupils in a selected class or cluster of classes so that small group instruction took place, thereby maximizing the benefits derived by lowering the participant/staff ratio and avoiding compartmentalization of the staff contained aspects of the tax-levy program. The following outlines the activities in the various areas.

a. Reading Component

The program in kindergarten was designed to provide, through small group instruction, maximum individual attention, to the needs of each child in language development and English as a Second Language skills.

Children were to be grouped according to their needs. Emphasis was to be placed on oral language and auditory skills.

The schoolwide departmentalized reading program was to place all pupils from grades 1-5 into homogeneous groups for daily reading instruction. Through a schoolwide master scheduling process, 3 periods were to be blocked in for specific grade clusters (RE: grades 1 and 2; grades 3 and 4; grade 5) within which class and grade lines were to be crossed.

Participating pupils were to be assigned to specially small reading groups within the departmentalized reading group program to assure a greater degree of individualization of learning activities with emphasis on mastery of basic reading skills.

Those Title I teachers who participated in the reading and reading related programs were to instruct those groups of pupils for approximately 50 minutes daily (250 minutes per week).

Intensive reading skills program was to be implemented with small groups of participants in grades 3-5 experiencing reading disabilities. This component was to utilize a personalized approach to the teaching of reading. Participants' needs and strengths were to be diagnosed, analyzed and incorporated with the participants' learning styles. These groups were to meet for 40 minutes three times a week (approximately 120 minutes a week with a teacher of reading).

A reading related oral and written communications skills program was to be compsed of participants in grades 1-5 who were exposed to reading and the use of language through experiental situations. Instruction was to directed at developing a personalized approach to writing. The functional writing experiences were to include personal

and business letter, outlines, reports and reviews. The creative writing activities were to includ conversations, biographies, ads, fictions and poetry. Grammar, capitalization, punctuation and proof-reading skills were also to be stressed. Groups were to beet 40 minutes 3 times a week (approximately 120 minutes a week).

A reading in the Subject Area program was to be composed of pariticipants in grades 4 and 5 who experienced difficulty in using the skills of reading in acquiring information pertinent to the subject areas. The focus was to be on the fusion of reading-study skills with content. (Social sciences, science, math, literature). Small groups were to meet 40 minutes 3 times a week (approximately 120 minutes a week).

b. ESL Component

The ESL program was to concentrate on the English communizcation skills of children of limited English ability on a small group basis. Pariticipating children were to be grouped according to their language ability and grade level (generally by the ESL teacher and an Educational Assistant/Teacher Aide, who were to use an oral-aural language approach. Small groups were to meet 40 minutes 3 times a week (approximately 120 minutes a week).

c. Mathematics Component

A modified departmentalized math program with participants in grades 2 through 5 were to receive math instruction daily for approximately 50 minutes in a small homogeneous group setting.

Intensive Math Skills program with small groups of participants in grades 2 through 5 were to meet for 40 minutes 3 times a week. This program was to emphasize the achievement of mathematical literacy for each student. Features of the program were to include: sequential program in instruction of mathematics skills appropriate to the needs and interests of participants; a presentation of mathematics content that was to reflect real-world applications; an on-going evaluation system to determine the progress of each student; utilization of innovative math materials and activities to provide opportunities for a discovery approach to mathematical concepts.

The program staff was to include six teachers and five educational assistants. Of the six Title I teachers, four were to give instruction in the read of reading and language arts; one in ESL and the other in mathematics. One of the reading teachers was to serve as the Project Resource Teacher.

Under the supervision of the Title I teachers, five paraprofessionals were to work daily with 6 small groups of 4-6 participating pupils in grade K-5. They were to reinforce pre-reading and reading skills and basic math concepts with participating pupils in grade 2-4. The following areas were also to be included in their work load: tutoring absentee children on skills needed; preparing instructional materials for work with small groups and individual children in participating population; attending staff-training sessions; keeping a written plan of their activities in small group instruction. Their services were to be allocated to the priority areas as follows:

50% - Reading; 30% - ESL; 20% - Mathematics.

Staff training was to include workshops, demonstration lessons and visitations for both professional and paraprofessional staff, on weekly basis.

The classroom teachers (tax-levy) were to be responsible for basic developmental reading, math or ESL instruction of the participating pupils; Project activities of Title I staff and participating pupils supplement the tax-levy program. Title I activities were to be basically diagnostic-prescriptive in approach.

2. Description of the Observed Program

a. Reading Component

Instruction took place in either alcoves, hallways, small rooms or offices. Every bit of available space was utilized in order to maximum small group and individualized instruction.

Through a school-wide departmentalized reading program the Title I staff was able to reach the target pupils. A diagnostic and prescriptive approach was used for the teaching of reading. Title I teachers kept extensive records of pupil needs and programs and there was an on-going evaluation of each pupil's strengths and weaknesses. Under the supervision of the Title I teacher the paraprofessionals worked with a small group reinforcing skills taught but not mastered or with individual pupils whenever such help was indicated. Informal conferences were held between Title I teacher and classroom teacher (tax-levy). The target pupils received a second reading period daily from classroom teacher. Schedule of Title I personnel was available.

Approximately 300 pupils participated in the Special Primary 31 Program. The process for selection was through standardized testing, classroom performance, teacher referrals and consultation with parents. Small homogeneous reading groups within the departmentalized reading program helped to provide a program of instruction which focused on individual pupil needs. Pre-and post-testing was an on-going process. List of participating pupils, their records, testing data and schedules were available.

Professional staff met primarily on an informal basis. Sessions were considered informative and helpful. Ideas were shared and an opportunity for the articulation of concerns was possible. Workshops were held at start of school year during faculty conference time and during lunch. Paraprofessional and professional staff did not have joint sessions. Paraprofessional training sessions were on a weekly basis.

Title I teachers were supervised and observed by the principal and by the assistant principal. Paraprofessionals worked under the direction of Title I teachers and were also supervised and observed by the principal and the assistant principal.

Workbooks, basal readers and experience charts were primarily in use. Audio-visual equipment, reading programs, games and books were also used.

Evidence of teacher planning and knowledge of subject was apparent. The varied assignments for the small groups and individual pupils indicated a plan for individual sequential skills development. Procedure seemed appropriate to maturity and ability level of pupil. Planning appeared to be sensitive to attention span of pupil. Participation was encouraged and there was an opportunity for the reinforcement of skills taught. Level of material used was suitable to reading ability of pupil. Generally a relaxed, informal atmosphere was evident.

Informal meetings took place between the Title I teacher and classroom teacher (tax-levy). The Title I teacher informed the classroom teacher (who provided second reading period daily) of pupils' needs and progress. Contact was generally brief and informal, as well as consistent.

b. ESL Component

The ESL program concentrated on the English communication skills of children of limited English ability on a small group basis. 65 children in grades K-2 and 55 children in grades 3-5 participated. Participating children were grouped according to their language ability and grade level (generally) in small groups of six to twelve. They left their regular classroom to participate in the program where they benefitted from a significantly lower per pupil ratio. These children were served by the ESL teacher and an Educational Assistant/Teacher Aide. An oral-aural language approach was used which included: emphasis on multimedia instructional approach; direct teaching of a selected vocabulary, structural language patterns and dialogue; oral exercises for relaxation; drill and practice in auditory discrimination, oral production of consonant and vowel sounds and rhythm and intonation of the English language; activities such as dramatizations, dialogues, oral reports, games, and songs were used to apply the learned skills. Many teacher made materials were in use, reflecting the orientation of the program which emphasized students' participation and interaction with teachers. Reading and writing activities applying the mastered listening and speaking skills (e.g. experience charts, controlled compositions) were also used. A phonetic approach in reading was emphasized.

Frequent communication with classroom teachers both facilitated coordination of the program with tax-levy instruction and noted individual student's needs and on-going progress.

Grouping was flexible. A great deal of attention was paid to individual student's needs. Small groups met 40 minutes, 3 times a week (approximately 120 minutes). Participating students were evaluated periodically and regrouped as needs changed.

c. Mathematics Component

The Special Primary School 31 Mathematics Program utilized a mathematics teacher and a paraprofessional to help implement a modified departmental math program for the two fourth and two fifth grade classes with Title I pupils. For one fifty minute period daily, the two fourth grade classes were split into four groups of about 12 to 15 each. The classroom teachers each taught a group, one of the groups went to the

Math Resource Center, and one of the groups was taught by the mathematics teacher and paraprofessional. This scheduling allowed for small homogeneous group mathematics instruction with these classes. A similar scheduling was arranged for the two fifth grade classes during a different fifty minute period daily.

The mathematics teacher and paraprofessional met their group in a corner of the gymnasium that was set up with a portable blackboard and movable chairs and tables. The math materials were stored in a hall closet and brought to the gym as needed. Other materials were borrowed from the Math Resource Center.

The pupils were tested to see where they were having difficulties and what topics should be covered. The first ten to fifteen minutes of the period consisted of a teacher led lesson, usually using concrete materials. The pupils were then given work or activities relating to the lesson and were helped individually by the mathematics teacher and paraprofessional. A record was kept of each pupil's progress.

These classes had a regular mathematics period taught by the classroom teacher in addition to the departmental math program. Small group instruction for third grade pupils who were having special difficulties with mathematics was also provided by the mathematics teacher.

3. Program Objectives and Data Analysis

a. Reading Component

1. The first grade children made a significant gain ($p=.05$) in total reading as measured by the Clymer-Barrett Pre-Reading Battery. (See Table 15.)

Twenty-nine (29) first grade children were provided with a diagnostic/prescriptive reading approach. All students were pre-tested the first week in October, 1977 and post-tested in May, 1978. A t-test for correlated means used to measure the significance of the differences.

2. The children in grades 2 to 5 demonstrated achievement in reading beyond expectation ($p=.05$) as measured by the Stanford Achievement Test, using normal curve equivalent scores. (See Table 16).

The participants included 32 students in grade 2, 37 in grade 3, 42 in grade 4, and 50 in grade 5. All children were pre-tested during the first week of October, 1977 and post-tested in May,1978. The data was analyzed according to the USOE Model A-1 design.

b. ESL Component

The children in kindergarten to grade 2 made significant gains ($p=.05$) in English oral language as measured by the Bilingual Syntax measure. (See Table 17)

The participants included 72 students in grades K and 1. All children were pre-tested during the first week of October, 1977 and post-tested in May,1978. A t-test for correlated means was used to measure the significance of differences. Data for each grade level has been analyzed and reported separately.

TABLE 15

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Spec. Prim. 31 Program by Grade Level

(Name of Test: Clymer-Barrett Pre-Reading Battery Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
1	23	59.4	16.6	97.6	20.0	13.43

TABLE 16

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Spec. Prim. 31 Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	28	27.5	7.0	43.6	8.0	14	38	12.60
3	32	23.0	12.5	40.2	13.3	10	32	8.32
4	37	33.3	10.3	44.3	11.9	21	39	7.33
5	47	28.6	10.1	44.8	10.5	16	40	12.96

TABLE 17

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Spec. Prim. 31 Program by Grade Level

(Name of Test: Bilingual Syntax Measure
Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
K	15	1.0	.0	2.0	1.0	3.87
1	23	1.3	.6	2.7	1.1	6.20
2	23	1.9	.9	3.2	1.3	6.04

TABLE 18

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Spec. Prim. 31 Program by Grade Level

(Name of Test: Basic Language Competency Battery (Cervenka) Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
3	18	101.3	7.5	116.3	8.5	7.38
4	9	106.7	11.5	120.2	6.4	3.95
5	17	112.4	26.7	125.6	6.5	2.44

TABLE 19

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Spec. Prim. 31 Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	22	22.0	8.6	42.6	11.6	9	36	8.83
3	15	30.0	8.4	49.2	11.2	17	48	6.79
4	14	32.0	8.3	45.2	9.7	20	41	6.37
5	12	33.1	5.2	46.5	6.7	21	43	8.77

2. The children in grades 3 to 5 made significant gains (p=.05)in English language ability as measured by the Cervenka's Basic Language Competency Battery. (See Table 18)

The participants included forty-four students in grades 3 to 5. All participants were pre-tested during the first week of October, 1977, and post-tested in May,1978. A t-test for correlated means was used to measure the significance of differences. Since appropriate normative data was not available, raw scores were used in the analysis of data.

c. Mathematics Component

1. The children in grades 2 to 5 demonstrated achievement in mathematics beyond expectation (p=.05), as measured by the Stanford Achievement Test, using normal curve equivalent scores. (See Table 19).

The participants included sixty-seven children in grades 2-5. All participants were pre-tested during the first week of October, 1977 and post-tested in May, 1978. Data was analyzed according to the USOE Model A-1 design.

4. Recommendations

a. It is recommended that there be several joint teacher and paraprofessional training sessions during the school year. That the resource teacher who is responsible for training of paraprofessionals be given time to plan and prepare for training sessions. That training program of the entire Title I staff be continued on a regular basis with emphasis on up-dating and improving educational techniques for the teaching of reading as well as the use of concrete materials (math).

b. It is recommended that Title I staff explore the different techniques, skills and varied approaches used to increase pupil participation and to improve interaction between teacher and pupil.

c. It is recommended that Title I teacher and classroom teacher (reading and math-Tax-levy) meet on a regular basis in order to articulate progress, strength, weaknesses and needs of participating pupils.

d. It is recommended that funds be set aside which would provide for the hiring of a substitute after five consecutive absences were recorded. This type of service would have aided the ESL component specifically.

5. Conclusions

On basis of data analysis, site observations, reaction of program staff as well as additional data gathered from detailed interviews, Special Primary School 31 program has been effectively implemented according to the Title I proposal.

It is a viable program because it is integrated with the greater school-wide program. Through a schoolwide departmentalized reading math and ESL program Title I staff provides target pupils with small group instruction through an intensive diagnostic/prescriptive approach.

This is a program which should be continued.

D. Bilingual Reading Lab (5045-81655)

1. Description of the Proposed Program

A bilingual reading lab was to be established in each school to provide supplementary language instruction for those students who had limited ability in English.

The lab was to be equipped with a wide variety of multimedia materials which were to be used to provide small group and individual instruction to the participating students in the areas of English as a second language, and language arts and reading skills in English and Spanish.

Students were to be selected to participate in ESL activities based on the results of the English version of the LAB (Language Assessment Battery) administered in April 1977. Those students who fell below the 20th percentile would be eligible for the ESL component. The following instructional sequence was to be followed in the ESL activities: listening and speaking, reading, writing, and independent study.

During the listening and speaking segment of the lessons, students were to be engaged in listening, comprehension and oral activities based on the lessons presented. In these activities, vocabulary and grammatical structures were to be taught through a variety of techniques such as the aural-oral method, the use of realia, illustrations, gestures and dramatizations. Through pratice in listening and speaking exercises, students would be able to internalize the vocabulary and grammatical structures introduced in each learning unit. In addition, teachers were to use filmstrips and tape recorders as the basis for language enrichment. Those students who successfully mastered listening and speaking skills would then proceed to the reading activities for reinforcement of the oral practice.

Various kinds of appropriate reading materials (fiction, poetry, drama, biography) were to be used to motivate the development of vocabulary and correct usage of grammatical patterns.

After completion of the reading activities, students were to be involved in written exercises such as copying, dictation, answering questions, controlled compositions, free composition, letter writing and taping original stories and story endings.

An Independent Study Center would be available for those students who needed additional practice with the structures and vocabulary of the lessons. Students would proceed at their own pace and would be grouped and regrouped according to their own progress.

Students who scored above the 10th but below the 20th percentile on the English version of the LAB, or who were reading at least 2 years below grade level as determined by the Stanford Diagnostic Reading Test would be eligible to participate in the English reading component. Those students

who scored above the 10th but below the 50th percentile on the Spanish version of the LAB test would be eligible to participate in the Spanish reading component in a combined weekly program with ESL.

A great variety of audiolingual tapes and materials were to be utilized to provide instruction in the fundamental reading skills: vocabulary and concept development, word attack (phonetic and structural analysis), comprehension, and work-study skills. A multimedia approach was to be used to motivate students to master fundamental reading skills. An individualized high-interest reading program was to be implemented to remediate those skill deficiencies.

Diagnosis of English oral proficiency was to be determined by the results of the LAB test and informal tests of mastery. Students would be grouped for lab activities according to their individual strengths and weaknesses in English and Spanish.

In each school bilingual classes of approximately 25 students were to be grouped for ESL, English reading, or Spanish reading and ESL instruction based on their individual needs into groups of no more than 10 students.

Each class would receive five (5) forty-five minute periods of lab instruction a week for a total of 225 minutes. The whole class was to attend each session accompanied by the classroom teacher.

The program staff was to include two Bilingual Reading Lab teachers and four Educational Assistants. The bilingual reading teachers were to implement the program in each school. His/her duties were to: provide instructional activities for the students; group and schedule students in conjunction with school supervisors; suggest materials for use in the lab; prepare instructional materials; supervise para and assist with their training; meet with participating classroom teachers on a regular basis to coordinate activities and to discuss student progress; maintain a recordkeeping system; provide appropriate orientation to parents of children participating in the project concerning the objectives and philosophy of the program.

The educational assistants were to assist the teachers in all instructional activities and recordkeeping. Under the supervision of the teacher, they were to provide small group and individual instruction. Joint planning with the teachers was to take place once a day for one period.

The classroom teacher was to bring the whole class of students to the lab and work with a small group of students under the direction of the program teacher. This approach was to allow for greater flexibility in grouping. Four groups were to meet in each class - one was to be led by the program teacher, one by the classroom teacher and one by each of the two educational assistants assigned to the program in each school.

On site supervision was to be provided by the school assistant principal in charge of bilingual education. At the district level,

supervision was to be provided by the district supervisor of bilingual programs. Under the direction of the district supervisor of bilingual programs, a program coordinator was to coordinate all activities and provide training. This person was to be paid under PSEN funds and also coordinate four similar labs funded under PSEN.

There were to be ten days of pre and inservice training sessions. This training was to be provided by the program coordinator (PSEN). In these sessions, a description of the program, suggestions for teaching ESL, English reading approaches, Spanish reading approaches, determining reading ability, use and maintenance of audio-visual equipment and materials as well as team teaching techniques were to be discussed.

There also were to be inservice training sessions held on a monthly basis from September to June. They were to be designed to upgrade the quality of instruction in the labs. Methods of teaching different skills were to be presented, such as: the use of contracts in the lab; oral development in Spanish reading; lab management through learning centers; sight, linguistic, multisensory and phonics approach to teaching reading; use of the cloze technique; ESL through songs.

2. Description of the Observed Program

The program was implemented in various stages from September to November according to the submitted proposal.

Approximately, 213 students in grades 3-5 were served by the Bilingual Reading Labs at P.S. 30 and P.S. 65.

Students were tested using the Language Assessment Battery in October. In October, students entered the Bilingual Reading Lab. The classroom teachers brought their classes to the lab. At P.S. 65, the lab had two classrooms available so that at least one group met in the second room. Usually the group involved in the most oral work met there so as not to disturb the other small groups which might be working silently. At P.S. 30, one classroom was arranged efficiently with seven different learning skills stations. The teacher spent an appropriate amount of time teaching students how to operate independently in this differently organized classroom.

In this setting, the lab teacher, the classroom teacher and the two paraprofessionals divided the class into small groups of students who worked in one subject area for the entire period. However, the possibility existed that during the same class time, students were classified into groups receiving ESL, and Spanish reading instruction activities, then the students received three periods of ESL and two periods of Spanish reading during the week.

Once in the Bilingual Reading Lab, students were tested with the Stanford Diagnostic Reading Test to diagnose specific English reading strengths and weaknesses. Following this phase, a high interest reading program was used to remediate the skill deficiencies.

Students were also tested periodically by teacher-made and other commercially prepared tests to assess program and mastery of new skills.

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Students were also tested periodically by teacher-made and other commercially prepared tests to assess program and mastery of new skills.

In addition, diagnosis of English oral proficiency was determined by the results of the LAB test and the Oral Language Ability Scale (OLAS). Spanish reading skills were determined by the results of the Prueba de Lectura which was used informally to determine reading achievement. Students were grouped for various lab activities according to their individual strengths and weaknesses in English and Spanish as indicated by the said tests.

The Independent Study Center was instituted in each lab, and was used as an aural-oral or reading area, according to need. Students were also able to work on individual assignments in the center.

The preservice training session for program teachers was held in September. This session consisted of a one day training in the areas of program objectives, activities, job descriptions and recordkeeping. An inservice training session for the program paraprofessionals and teachers was jointly held in October. This session consisted of uses of diagnostic tests, standardized tests, grouping for instructional purposes, and lab management.

Following this pattern of joint meetings between lab teachers and educational assistants, the coordinator organized and held sessions dealing with use and maintenance of audiovisual equipment and materials, the teaching of English as a second language, determining reading ability, approaches to the teaching of reading in English and Spanish, and team teaching techniques.

Other district coordinators were invited to speak at several meetings. Their topics included oral development and reading in Spanish as well and evaluation processes and procedures.

One meeting was held at each of the lab sites so lab teachers and educational assistants could share ideas and learn from their peers.

In addition, the program staff attended an inservice workshop dealing with classroom management held at the Regional Bilingual Training Resource Center of the Board of Education.

The program coordinator made biweekly visits to the schools and had individual conferences with the bilingual classroom teachers, although formal inservice training was provided by the Bilingual Reading Lab Teachers. The Coordinator was in addition responsible for the examination, ordering and distribution of materials based on teacher input. The lab teachers and the classroom teachers in each school were in direct contact daily during each lab period. At that time they shared information informally regarding the on-going progress and needs of individual students as seen in the general classroom work and in the work observed in the Bilingual Reading Labs.

3. Program Objectives and Data Analysis

a. In ESL, the participants in grades 3 & 5 made a gain beyond expectation ($p=.05$) in English language skills as measured by the Language Assessment Battery (English version). (see tables 20 and 21).

b. In reading (Spanish), the grade 5 participants made a significant gain ($p=.05$) as measured by the Language Assessment Battery subtest scores (see tables 22 and 23).

TABLE 20

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling. Rdg. Lab. Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	3	53	2.3	4.9	4.3	7.3	2.61
	4	35	15.6	7.4	19.6	4.8	2.55
	5	43	17.1	9.7	19.6	5.6	1.70
Reading	3	53	3.3	2.8	7.8	4.0	6.36
	4	35	8.0	5.8	8.4	4.0	0.44
	5	43	7.9	4.8	11.8	5.5	4.09
Writing	3	53	4.2	2.6	6.6	4.1	4.66
	4	35	5.5	2.8	6.7	4.2	1.54
	5	43	6.3	4.2	10.3	4.8	5.32
Speaking	3	53	11.3	6.9	7.3	3.6	-4.59
	4	35	7.0	4.4	7.3	2.6	0.28
	5	43	7.7	4.9	10.5	4.0	3.53

TABLE 21

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling. Rdg. Lab Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
3	53	6.0	7.8	15.9	12.3	2	5	6.93
4	35	10.1	7.6	13.0	8.4	3	4	1.61
5	43	6.4	5.5	11.9	7.9	2	4	4.49

TABLE 22

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Bilingual Rdg Lab Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	4	13	14.3	8.5	19.5	5.7	1.41
	5	19	18.9	8.9	20.8	4.0	1.05
Reading	4	13	10.7	7.5	9.2	3.9	-0.78
	5	19	9.0	5.1	11.8	5.1	2.24
Writing	4	13	5.9	2.9	7.7	4.3	1.12
	5	19	7.8	4.9	10.7	5.1	2.87
Speaking	4	13	9.1	3.9	7.8	1.9	-0.99
	5	19	8.6	4.5	11.9	1.6	3.14

TABLE 23

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Bilingual Rdg. Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
4	13	11.4	6.2	15.0	9.4	3	5	0.97
5	19	7.7	6.4	13.2	9.2	2	4	2.73

TABLE 24

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Reading Lab Program

Name of Test: Stanford Diagnostic Reading Test
RED Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants (Test 3)	1	5	6	0
2106	Vowels; Single letters (Test 3)	1	5	3	3
2305	Word Meaning (Test 4)	1	5	6	0
2404	Facts & Details (Test 5)	2	4	6	0

1. Number of Students = 6
2. Grade 3

TABLE 25

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Reading Lab Program

Name of Test: Stanford Diagnostic Reading Test
RED Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants (Test 3)	11	17	15	13
2106	Vowels: Single letters (Test 3)	12	16	19	9
2305	Word Meaning (Test 4)	15	13	22	6
2404	Facts & Details	10	18	16	12

1. Number of Students = 28
2. Grade 4

TABLE 26

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Reading Lab Program

Name of Test: Stanford Diagnostic Reading Test
RED Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants (Test 3)	18	15	21	12
2106	Vowels: Single letters (Test 3)	23	10	27	6
2305	Word Meaning (Test 4)	12	21	23	10
2404	Facts & Details (Test 5)	10	23	26	7

1. Number of Students = 33
2. Grade 5

c. In reading (English), the participants demonstrated mastery of the objectives listed in the SED classification index. Stanford Diagnostic Reading Test data has been reported in criterion referenced format. (see tables 24-26).

Grade 3: - Phonetic Analysis: 2102, 2104, 2106
Vocabulary: 2305
Comprehension: 2404, 2407

Grade 4: - Phonetic Analysis: 2102, 2104-6, 2108
Vocabulary: 2305
Comprehension: 2404, 2407

Grade 5: - Phonetic Analysis: 2102, 2104-8
Vocabulary: 2305
Comprehension: 2404-7

All students were pre-tested in October 1977 and post-tested in May 1978. The participating population included 120 students in ESL and 27 in ESL and Bilingual Methodology (grades 3-5). For the first objective, data were analyzed using the USOE Model A-1 design. Each grade has been reported separately. For the second objective, a t-test for correlated means was used to measure the significance of the differences. Each sub-test, each grade and each component has been reported separately.

A total of 66 students in grades 3 to 5 participated in the reading (English) objective. The Stanford Diagnostic Reading Test data have been reported in criterion referenced format. Data for each grade level have been analyzed and reported separately.

4. Recommendations

a. It is recommended that more formal training sessions be given to orient the classroom teachers who will be participating at each site to the goals and techniques used in the program. It is further recommended that these sessions be provided by the District Coordinator at each site in each lab where the classroom teachers will be working.

b. The Educational Assistants participating in the program were experienced and effective in teaching reading but were less strong in ESL techniques. Therefore, it is recommended that there should be additional on-going on-site training for the Educational Assistants in ESL techniques.

c. It is noted that there were generally adequate materials available to the program. In some instances the groupings were larger than the number of available materials at each level. It is recommended that more Spanish and English Reading materials be made available as well as replacement for A/V equipment stolen from the school sites. Spanish language materials suitable for adaptation for use in "contract" work are also needed.

5. Conclusions

The Bilingual Reading Lab Program has been effectively implemented according to the Title I proposal.

The program was one of a diagnostic prescriptive approach which utilized small group and individual instruction in a multimedia materials lab setting. The program was unique in that the bilingual classroom teachers and the Bilingual Reading Lab Teacher worked together in the lab in order to supplement English language instruction for students with limited ability. Mutual respect and cooperation were evident among all personnel involved. Principals noted carry over of skills in the area of classroom management from the lab setting to the regular classroom setting by classroom teachers. This was especially useful in helping children establish greater independence in their work habits.

E. Diagnostic Prescriptive Learning Program (5045-81656)

1. Description of the Proposed Program

The Diagnostic Prescriptive Learning Program was to establish 12 learning labs which would utilize instructional methodologies that would implement a developmental language/reading program evolving into a diagnostic/prescriptive approach to the teaching of reading.

The methodology utilized was to correct reading deficiencies varied with the needs of the individual child. The labs were to be equipped with a wide variety of materials and testing instruments. The lab teacher was to select the type of method, material, etc., to be used with each child.

Children in the lab were to work with small groups (5-6 children) or individually. The lab program would evolve thru the following phases: Phase I- children were to be grouped at success levels according to pre-assessment testing. This was to be a multi-media program which would assist the children in developing independent work/study habits, guarantee success in order to build a trust relationship in the lab and have a heavy concentration of vocabulary and language development. Phase II - when children were able to successfully adapt to the multi-level developmental program and acquire some fundamental skills to work independently, the second phase or diagnostic prescriptive phase would begin. Each student was to be given a diagnostic work-up utilizing one or more of the following devices: Fountain Valley Reading Tests, Prescriptive Inventory Tests, Informal Reading Inventories, teacher made Mastery Tests and Telebinocular Eye Tests. Once this information was analyzed, a profile of reading skill deficiencies was to be developed and maintained. The diagnostic data on each child would be sent to the dsitrict prescriptive processing site where the information would be submitted via a computer terminal to a computer storage bank. The computer would print out a prescription indicating the work plan that each child was to follow in order to remediate specific reading skill deficiencies. The process would occur once every other month for program participants.

In the lab, the child would be taught how to use his computerized prescription ("contract"). The student would be taught how to read his contract, select the appropriate materials indicated, self-correct upon completion, and request teacher assistance.

Approximately 1500 students in grades 3 to 6 were to be served by the program. Five classes at each site would attend the lab for four periods a week. Each period would be 45 minutes in duration for a total of 180 minutes per week. The lab would hold classes for a weekly total of 900 minutes.

The program was to be staffed by twelve reading lab teachers, twenty-four educational assistants, one floating lab teacher, one teacher trainer and a supervising stenographer.

2. Description of the Observed Program

At each school site, instructional facilities constituted at least a sizable lab that housed the multi-media materials used in Phase I. Most schools had an additional room which housed the contract materials used in Phase II. Tax-levy teachers who had attained Phase III level of competency used their own classrooms to accomplish Phase III objectives. In this phase, materials were housed in Phase III level classes, affording children additional time each week to work in reading skill development.

The labs, contract rooms, and tax-levy classrooms of Phase III were exceedingly well-arranged and conducive to learning. Stations for cluster-group instruction were clearly designated, materials were readily labeled and available for children, and programmed material (cycles) were designated each day for each grouping prior to the time the children arrived for class. The skillfull use of materials allowed for a maximum amount of instruction time each period.

The cycling of the varied and multi-leveled materials used in differing school locations was a major feature of the program.

The Diagnostic Prescriptive Learning Program was staffed by the following personnel: Program Coordinator (PSEN funded), one Teacher Trainer, 12 Reading Lab Teachers, 24 Educational Assistants, one Floating Lab Teacher and one Supervising Stenographer.

In each school, the tax levy teachers were key personnel who maintained program efficiency. Usually five tax-levy teachers participated in each school; however, in the I.S. schools as many as eight tax-levy teachers participated.

The duties of each staff level were as follows:

The Program Coordinator (PSEN funded) was responsible for overall program design, implementation, and staff training. She acted as a link between the DPLP staff, the principals, the schools and the community. She conducted the Mastery Application Plan to evaluate competencies of the program staff, & maintained schedules of staff & children in the program.

The Teacher Trainer assisted in training all staff in various aspects of program and visited each lab on a regular basis for on-site consultation and assistance. The teacher trainer helped conduct para and teacher training workshops as well as assist in the ordering of materials.

The Reading Lab Teachers provided instruction in each of the three phases; supervised and helped train educational assistants; functioned as in-house teacher-trainer for each of five or more participating tax-levy classroom teachers; established a systems approach reading program for children which also provided a management training experience for teachers; developed resource files on materials, tests, inventories, and student data.

The Educational Assistants assisted in all aspects of the reading lab and related components under the direction of the reading lab teacher. Duties included working with small clusters of children, operating reading machines, retrieving and storing all materials used in the lab, assisting in correcting children's work and assisting with the instruction of specified reading lessons.

The Floating Lab Teacher assumed the instructional role for all lab teachers in the program on a rotating basis. These duties included managing the laboratory and paraprofessionals, working with small clusters of children as they were regularly scheduled into the lab, and assuming all instructional responsibilities assigned to the regular lab teacher for the date of assignment.

When the floating lab teacher was scheduled into the school, the lab teacher and the classroom teacher were able to meet for coordination and training sessions. This scheduling took place every thirteen days.

The Supervising Stenographer supervised clerical staff; took dication and prepared materials of a confidential nature; screened and prepared correspondence; maintained financial records; and duplicated and distributed student records.

In the twelve Title I Program Schools, 1,669 children were served from grades three through six. The number of children assisted by grade level was as follows:

3rd graders	504
4th graders	447
5th graders	491
6th graders	227
Total	1,669

The children in the program were identified in the Spring of 1977 by the New York City Standardized Test. Children who scored below minimum competency in reading achievement were identified as program eligible for the 1977-1978 school year. The Stanford Achievement Test served as the pre and post test instruments to assess both individual participants' reading gain and program efficiency. The Fountain Valley Diagnostic Management System served as the diagnostic instrument of skill deficiency. This was administered prior to Phase II, the contract, prescriptive phase of program implementation.

Testing records, Fountain Valley Cumulative Record Cards, and pupil participation lists were available at all program sites. In addition, records were kept of the EDL Listen, Look and Learn cycles completed. These records then served as a measure of reading achievement. Some DPLP teachers also integrated behavior modification reward techniques with the daily performance of reading work, and progress charts made achievement clearly visible.

Orientation and training of DPLP personnel was an integral part of this program. Each DPLP teacher had received both formal and on-the-job training in lab techniques, in contracting, and in classroom management systems. DPLP teachers and paraprofessionals felt that their initial training sessions were of great importance and value to them. All DPLP teachers held the program coordinator and teacher trainers in great esteem for their leadership and training capabilities. Additional training was held during the year in scheduled workshops. The DPLP teachers had training on one day and the paraprofessionals had training on two other days. In this way the labs continued to function in the participating schools since the tax-levy teachers were a part of the DPLP team and participated with groups in the lab. Once again, the DPLP staff lauded the high quality and professionalism of the on-going training sessions. Two major workshops focused on speakers who were key authors of major materials used in the program.

The Mastery Application Plan (MAP) became a diagnostic tool for assessing skill mastery of the DPLP Resource Teachers and Paraprofessionals. Training sessions were instituted based upon observations made and indicated on the MAP by the Program Coordinator and Teacher Trainer. This aspect of training became an individualized training session for each resource teacher and paraprofessional who was deficient in any aspect of Phase I, II, or III of program implementation.

The most important feature of training was that afforded to the tax-levy teachers. While the ostensible purpose of the DPLP program was to raise the reading achievement of Title I eligible children, the procedure of involving and training the tax-levy teachers in diagnostic-prescriptive approaches may have far more long-range value for future classes of children. In this regard, the Floating Lab Teacher became a key figure in allowing direct training to occur. The floating lab teacher visited each school on a rotation basis, releasing the lab teacher to work with the tax-levy classroom teachers during the entire day on student problems and prescription techniques. Thus, a structured time period was allotted to insure that teacher training would be maintained throughout the year. Participation of tax-levy teachers in the DPLP program permitted the classroom teachers to enhance their skills in the management and implementation of an individualized diagnostic/prescriptive approach to reading. The success of Phase I was dependent upon the management training system received by the classroom teachers, while their students were placed into "success" groups. A success group emphasized the students' strengths, prior to the development of student prescriptions.

During Phase II, the trained classroom teachers and the lab teachers administered the Fountain Valley and various other informal diagnostic tests to their students. Once the students were diagnosed, the classroom teachers were trained to develop individual prescriptions or contracts for each student. In this setting, the classroom teacher became an integral part of the DPLP team, each working with specific groups of students. For each student, records were maintained which included the lab work folder, the prescription/contract work folder, the Fountain Valley Diagnostic Record Form, and attendance records.

During Phase III, the lab teacher assisted the classroom teacher to implement reading objectives into the regular classroom setting. The success of this phase was dependent upon the assertiveness of the lab teachers as well as the support given to the classroom teachers by school administrators. At this point, the students were provided with developmental reading studies in the lab setting while remedial reading studies continued in the classroom.

Supervision at each school was provided by either the Principal or the Assistant Principal in charge of reading. Principals were generally highly knowledgeable of DPLP goals and stages. They accomplished both formal and informal supervision of the DPLP resource teachers and paraprofessionals.

General coordination of the entire program staff was provided by the program coordinator paid under PSEN. She met with the building principals on an informal basis and acted as the link between program goals and building implementation. She discussed the results of the Mastery Application Plan with each building principal so that the principals would have an awareness of the curriculum competencies of their resource teachers and paraprofessionals.

Materials consisted of hardware with audio-visual cycles to accompany the hardware and software in the way of texts, programmed readers, skill books, and reading kits. Since the program has been maintained in the district since 1973, the major hardware components of the lab phase (Phase I) from EDL/McGraw-Hill Listen, Look and Learn Communication Skills System or the Learning 100 System were operational in the program schools. What was needed during the year was to replace worn and damaged equipment, purchase or replace new learning cycles, and to maintain servicability of the machinery.

Phase I, lab operation, generally used the following on a daily basis. when presenting a cycle: a.) Aud-X Presentation - slide and tape subcomponent or word presentation. b.) Tach-X Word Recognition Training - Words that were auditorily presented during Aud-X training were now flashed on screen at varied calibrated speeds. c.) Controlled Reader Process Training - A short story was presented via machine in one-word exposures at a rapid rate. The words presented during Aud-X and Tach-X training was now used in a meaningful setting. At the same time, this activity allowed children to view words in an overlapping setting with one fixation per word. d.) Controlled Reader Fluency Training - A complete story was viewed on a screen with words running from left to right. Speed was calibrated to adjust for reading rates of differing groups and individuals. The words in the story were previously taught in the cycle. After the story was completed via machine, the child answered comprehension questions about the story in a study guide. e.) Some teachers integrated levels and components of the Target Tape series by Addison-Wesley Publishing Co. The Target Tape series emphasized word attack skills, vocabulary development, and reading comprehension via a multi-media approach. f.) Union School Products' Hit Songs were used in a sing-a-long fashion; then phonetic and structional analysis were followed up on dittoes. g.) Clue Magazine tape series presented phonic and comprehension exercises.

Phase II and Phase III Components used appropriate, individual levels from the following materials: a.) Science Research Associates, Reading Labs 1a-3b, b.) Be a Better Reader, by Prentice-Hall, c.) Cambridge Work-A-Texts, by Cambridge Pub. Co. d.) Barnell-Loft Specific Skills Series (eight skills across grade levels 1-9), e.) Gates Peardon, Practice Exercises in Reading, f.) Reader's Digest, Skill Builders and Practice Pads, g.) McGraw Hill Pub. Co., Reading for Concepts, h.) McGraw Hill Pub. Co., New Practice Readers, i.) SRA, Countries and Cultures Kit, j.) SRA, Graph and Pictures Kit, k.) SRA, We Are Black Kit, l.) SRA, Dimensions: Our Story: Women of Today and Yesterday, m.) EDL, Study Skills Laboratories, n.) Random House, Task Analysis Books, o.) Random House, Skillpacers, p.) Cornerstone Readers and Kaleidescope Readers, q.) Ginn Word Enrichment Program, Ginn Pub. Co., r.) Phonics Crossword Puzzle by McCormick Mather, s.) Durrell Murphy Phonics Kits, t.) SRA, Reading for

Understanding Skills Kits, u.) SRA, School House Kit.

While most of the materials were provided through special tax-levy and Title I funds, in some instances, principals appropriated school tax-levy funds to purchase additional sets or levels of materials to coordinate with Phase II and Phase III components. Tax-levy purchased materials were keyed into program prescriptions.

The Diagnostic Prescriptive Learning Program established learning laboratories which provided a developmental language/reading program that evolved into a diagnostic/prescriptive approach to the teaching of reading. A major feature of the program was the continuity and coordination between the classroom and the lab, achieved by the participation of the tax-levy teachers in lab and diagnostic-prescriptive activities. As a terminal objective, students participated in a dual-impact reading program, receiving both the developmental language program and having their diagnosed reading skill deficiencies remediated. The tax-levy teacher's classroom became a satellite of the lab during Phase III program implementation.

The methodology utilized to ameliorate reading deficiencies varied with the needs of the individual child. The lab was equipped with a wide variety of materials and testing instruments. With these tools the lab teacher provided a variety of materials at the instructional reading level of each child.

Structurally, the lab worked with small cluster groups (5-6 children) and individuals. As the lab became more refined during Phase II operation, ad-hoc groups were formed. These groups were formed based on reading deficiencies noted on the Fountain Valley and other instruments that diagnosed individual needs.

The DPLP evolved through the following phases: Phase I - Children were grouped at success level according to pre-assessment testing via the EDL-McGraw Hill, Listen, Look and Learn Developmental Reading Program. In the intermediate schools, the Learning 100 Communication Skills System, also from EDL/McGraw Hill, was used. The Learning 100 System was unique in that it was written for adolescents, sensitive to their reading deficiencies. It allowed students to master basic communication skills while presenting content of high interest and relevance.

Both EDL systems featured multi-leveled, non-graded programs, allowing children to work at their appropriate level and rate alongside students functioning at vastly different levels. As a multi-media program with a heavy concentration of vocabulary and language development, it assisted the children in developing independent work/study habits. The daily increments of cycles within a given reading level helped guarantee success and fostered a trust relationship in the lab. Additionally, this program was used because it provided a vehicle of instruction whereby several EDL program groups, independent working groups, and individuals could be involved in reading activities at the same time without interference from each other.

Both EDL systems presented new sight vocabulary, word attack skills, and comprehension skills orally before visual skill application. Lab students during

the structured sub-components of a cycle heard pronunciation, directions, and explanations before they read them. The EDL format of Aud-X, Tach-X, Controlled Reader, and Process Trainer presentations of the same vocabulary enabled words to be used many more times in a lesson than through a traditional approach.

Phase II - When children were able to successfully adapt to the multi-level developmental program and acquired some fundamental skills to work independently, the second phase or diagnostic/prescriptive phase was implemented. At this point each student was given a diagnostic work-up utilizing one or more of the following devices: Fountain Valley Reading Tests, Prescriptive Inventory Tests, Informal Reading Inventories, teacher-made Mastery Tests and the Telebinocular Eye Tests. As a result of these tests, a profile of reading skill deficiencies was maintained. Some teachers opted to write out individual prescriptions on each child based on a taxonomy of reading skills and levels. Others sent the diagnostic data to the district prescriptive processing site where the information was submitted via computer terminal to a computer storage bank. Almost immediately, the computer printed out a prescription telling the work plan that each student was to follow in order to remediate specific reading skill deficiencies; the exact book, page, etc., was noted on this prescription. A prescription update occurred approximately every other month for each child.

The computer bank had on file a comprehensive taxonomy of reading skills which was keyed to a set of behavioral reading objectives. The computer was universal in that any diagnostic tool that tested the basic behavioral objectives selected was able to be used.

In the lab the child was taught how to use his computerized prescription (referred to henceforth as "contract"). The student learned how to read his contract, how to select the appropriate materials indicated, how to self-correct upon completion, and how to request teacher assistance.

Phase III - Phase III activities carried over in the tax-levy teachers' classrooms as a continued refinement of the diagnostic/prescriptive process. When classroom teachers demonstrated the proficiencies of Phase II activities, diagnostic/prescriptive activities were then established in the regular classroom. In addition to the four regular lab periods, classroom teachers added a minimum of two additional periods per week in diagnostic/prescriptive activities. These classrooms were equipped with reading materials, small lab boxes, and reading kits that were similar to the materials of Phase II.

There was exceedingly good coordination of the DPLP activities with on-going school programs. When principals were asked their impression of the DPLP in their own school sites, the answers were almost always, "the best; I wish I had more; fantastic; number one." The only criticism some principals voiced was that they didn't have enough control in the criteria for selecting the target population. However, Title I guidelines establish the criteria and to insure proper funding, the criteria must be followed.

Carry over into the tax-levy classrooms was one of the most important features of the DPLP program. This carry over has been noted throughout the report. Furthermore, in many schools where there was a strong, assertive DPLP teacher, many more tax-levy teachers were influenced than just those who actually had their class groups participating in the lab and in Phase II and III components. Other teachers in the building, seeing the positive results with the poorest readers, would ask the LAB Teacher for advice, materials, or diagnostic management procedures.

When the participating tax-levy teacher reached the Phase III competency level, he/she truly became a teacher of reading, sensitive to individual needs and reading levels. The optimum would be to influence all tax-levy teachers of a school.

3. Program Objectives and Data Analysis

In total reading the participating students made a significant gain (p=.05) with the exception of students in grades 3 and 4 as measured by appropriate levels of the Stanford Achievement Test. (See Table 27).

A total of 1500 students in grades 3-6 participated. All participants were pre-tested in October, 1977 and post-tested in May, 1978.

Data were analyzed using the USOE Model A-1 design. Data for for each grade level were reported separately.

4. Recommendations

a. It is recommended that the Diagnostic/Prescriptive Learning Program continue to function in District 7.

b. It is recommended that the Project Coordinator consult with the administrative staff of each school in the spring of each year, preferably after the results of the Stanford Achievement Tests are posted. Two objectives would be accomplished. First of all, principals would share in the positive results of the year's program, plus they would have some input into the following year's selection of students. This individual conference should be followed up with an additional meeting in the fall of the year.

c. It is recommended for those schools wholly cognizant of DPLP goals and sophisticated in diagnostic/prescriptive techniques that the Fountain Valley and other diagnostic testing be administered earlier in the school year. In that way, computerized contracts would return to the schools earlier in the year to begin Phase II and III components.

d. It is recommended that a Floating Lab Educational Assistant be added to the program staff to cover long-term illnesses, jury duty, maternity leave, etc. of Educational Assistants assigned to the DPLP labs. It is imperative that the lab operate with the two Educational Assistants.

e. It is recommended that the district investigate the feasability of purchasing their own computer rather than using a rental system. The cost might be borne by the two funding souces - Title I and PSEN. The purchase might equal the cost of a one or two year rental and the district would have more control over maintenance. A consultant might then be engaged to add to the computer contract program and provide for speedier contract services to the schools.

TABLE 27

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Diag/Pres Learning Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
3	426	27.7	14.1	28.3	12.9	14	15	1.24
4	390	28.7	10.8	28.4	11.8	16	15	-0.73
5	443	28.1	12.2	33.0	12.9	15	22	10.62
6	192	29.0	11.2	31.6	13.6	16	19	3.41

5. Conclusions

There is no doubt that the DPLP was a strong, effective program. Children benefitted on a daily basis and were made to be successful in the classroom setting. Tax-levy teachers were trained in diagnostic-prescriptive techniques and to be aware of matching appropriate level materials with reading levels of children. The school staff benefitted in that the reading achievement of its poorest readers rose.

The program is unique in that the classroom teachers are trained in the use of a classroom management system which allows for greater individualization of instruction as the students are selected, diagnosed, grouped and prescriptions are developed for them.

F. Math Resource Center (5045-81657)

1. Description of the Proposed Program
   a. Elementary School Component (grades 3-6)

The Mathematics Resource Center established in each school were to contain various math kits, manipulative materials, texts and A.V. supplies. The seventy-two participating children in each school were to be diagnosed to determine their strengths and weaknesses in mathematical skills. According to their diagnosed needs, students were to be programmed in small groups or on an individual basis. There were to be a minimum of twelve (12) students in each group, meeting a minimum of three times a week for 45 minutes.

The Math Resource Teachers were to prescribe corrective mathematics instructional activities according to the needs of each child. He/She were to be assisted in all instructional activities by an educational assistant.

Educational Development Corporation Criterion-Reference Testing were to be used for diagnosis. Teachers were to receive computer print-outs for each child and class group. These print-outs were to be used to maintain the on-going records of each child. Each child was to also keep an independent folder where he/she would be able to keep his/her own records. Students were to have the opportunitiy to do independent work and to develop the process skills in obtaining mathematical information, doing calculations, checking work and making corrections.

   b. Intermediate and Junior High School (grades 6-9)

The Mathematics Resource Center established in each school were to contain various laboratory equipment, math kits, manipulative materials, workbooks, textbooks, A.V. materials, and other classroom supplies. A diagnostic prescriptive approach was to be used to provide individualized and small group instruction to the participating students to supplement their regular school math program. The diagnostic instrument developed by the District 7 teachers were to be used as the diagnostic tool.

There were to be no more than fifteen (15) students in the Resource Center at a given time, meeting a minimum of three (3) times a week for 40 minute periods. The math lab teachers were to prescribe corrective mathematical activities according to the needs of each child. The teachers were to be assisted by an educational assistant leaving an instructional ratio of 7:5:1. Electronic calculators such as the Compet 626, the Logos 55 and hand-held calculators were to be used to provide motivation to check work done without their use.

Audio-visual materials were to be used to provide motivation for students at individual stations and in small groups. Games and mathematical manipulative materials were to be used to provide students with practical application of learned skills.

The program staff was to include 18 math teachers, 18 educational assistants, 2 coordinators and one senior stenographer.

Ledgers were to be maintained indicating results of students' diagnostic tests and prescriptions. In addition each student was to have a folder containing assignments, contracts, progress, diagnostic/prescriptive sheets (elementary schools) and all other work.

2. Description of the Observed Program
   a. Elementary Schools

The Mathematics Resource Centers were located in classrooms with movable furniture. Most of the rooms were large and airy; however, in two schools the Centers were limited by space. Rooms were arranged to make provision for group and individual work, viewing sound filmstrips and films and listening to audiocassettes, and working with games and manipulative materials. Some rooms had specific areas set up for viewing and listening and using calculators. Most of the rooms had stations corresponding to topics in the curriculum: number and numeration, addition and subtraction, fractions, multiplication and division, measurement, and geometry. Hardware was locked in cabinets, but manipulative materials, math kits, games (commercial and teacher-made), workbooks and rexographed sheets, and supplies were attractively displayed and labeled for easy access.

The Mathematics Resource Centers were coordinated by a Project Coordinator. His duties included planning and scheduling the training of teachers and paraprofessionals, conducting inservice and preservice programs and training, arranging for consultants to assist in the training, suggesting materials for use in the centers, assisting teachers in ordering supplies, assisting teachers with the planning and implementation of the program, monitoring the program through scheduled visitations and on a daily basis, attending conferences concerned with innovative mathematics programs, and implementing evaluation design.

Each Mathematics Resource Centers was staffed by a teacher and a paraprofessional (both Title I). The teacher was selected on the basis of desire to participate in the program, experience, seniority, mathematics background, and performance in the classroom. The paraprofessional was selected on the basis of seniority in the program. New paraprofessionals had to demonstrate a minimum of ninth-grade level in mathematics. Most staff members have been in the program since its inception.

Staff schedules conformed to the UFT contract and generally consisted of 6 classes 3 times a week plus periods of small group instruction or administrative assignments. In one case, the fifth and sixth grade groups were scheduled 5 times a week. Each period was 45 minutes.

The teacher, with the assistance of the building supervisor and the classroom teachers, selected children to participate in the program. The teacher supervised the administration of the Stanford Diagnostic Math Test and grouped and scheduled children according to the results. The teacher prepared the group schedules on the basis of the taxonomy developed by the teachers in the program. Individual prescriptions were then prepared by the teacher and displayed on the board or wall. The prescriptions indicated skill and pupil assignment. The teachers also prepared a folder for each child in

the program. The teacher dated completed items on the taxonomy or on the pupil assignment sheets. The teachers also prepared the room and supervised the paraprofessionals.

The paraprofessionals assisted the teachers with the administration and scoring of the Stanford Diagnostic Math Test. They helped to implement the program and evaluated the work of individual children and groups. In many instances, paraprofessionals developed and made specific games for the Mathematics Resource Center.

Teachers and paraprofessionals planned jointly and continuously consulted on prescriptions for individual children.

In September, the Mathematics Resource Teacher, under the supervision of the Principals, selected 72 children per school to participate in the program. The students were selected on the basis of test scores, holdovers, teacher-recommendation and previous assignment to the program. Children attended the Mathematics Resource Center for a minimum of three periods a week.

Individual records were maintained for each child showing his/her answers on the Stanford Diagnostic Math Test and the prescriptions assigned. Progress was indicated in a variety of ways by dating assignments, checking items on the taxonomy, and indicating completion of prescriptive tasks. A portfolio of work with a calendar of assignments was maintained for each child in the program.

Most staff members have benefitted from the cumulative training in the program. Most of the teachers have been in the program for three or four years. Paraprofessionals have received a minimum of 60 hours of training.

In September, teachers and paraprofessionals participated in a four-day training program conducted by the Diagnostic Prescriptive Arithmetic Program staff of Community School District 31. There was additional training on specific administrative procedures within the program.

Once a month, teachers and paraprofessionals attended two-hour training sessions led by the Project Coordinator. These sessions took place in individual Mathematics Resource Centers on a rotating basis. Some sessions used consultant expertise. Chisanbop was demonstrated by the Mathematics Coordinator of Community School District 8.

The program was supervised by the individual school building administrators for the eleven schools in the program. The Project Coordinator made monthly scheduled visitations to each Mathematics Resource Center. In addition, he made two scheduled visits to each school at the beginning of the pre-testing and after the post-testing of the children. Other visits were made as needed. School building administrators (principals and assistant principals) made formal and informal supervisory visits to the teachers and paraprofessionals. In all cases, the teachers directed the paraprofessionals assigned to their Mathematics Resource Centers.

The Mathematics Resource Centers establised in each school contains math kits, manipulative materials, rexographed materials,

resource books, thermofax masters, filmstrips, cassettes, calculators, games, and supplies. The most frequently used materials were math kits, teacher-made games, metric materials, commercial games, rexographed materials, filmstrips and audio-cassettes. Many of the Mathematics Resource Centers used the games made at the DPA Training Sessions.

Children were selected for the Mathematics Resource Center through standardized math test scores and/or teacher recommendation. Diagnoses and prescriptions were available to classroom teachers.

The instructional activities seemed to be directed into introducing concepts, practicing computation, and reinforcement skills through games. Most instruction was on a one-to-one or small group (2-4) basis. Most of the children seemed to be working on measurement, place value, numeration, addition and subtraction, multiplication and division, introduction to fractions, and basic fact drills.

One teacher relied heavily on audiovisual materials - audio filmstrips, audiocassettes, and Pathescope; another teacher utilized Dataman. Most teachers favored teacher-made and commercial games to meet prescriptions.

The children's folders served as a record of activities with calendars indicating what had been done at each session. Folders indicated work with drill kits, puzzles, concept games, group games, use of A-V materials, and instruction with manipulatives

Several principals utilized the Mathematics Resource Teachers to help to meet staff needs in mathematics. These teachers presented workshops at staff meetings. One teacher was scheduled for articulation; two rooms were also used as resource rooms for the school. Where there were two mathematics programs, there was good articulation between the two math teachers.

b. Intermediate and Junior High Schools

The Mathematics Resource Centers were located in classrooms with movable furniture. Rooms were arranged in each school so that there were areas for group work, individual work, viewing films and filmstrips, and listening to audiocassettes. Some rooms also had specific areas for using calculators (hand, desk and Mathaputer). Math kits, textbooks, workbooks, rexographed material, games and manipulatives were available on shelves or tables around the perimeter of the room. Hardware and some software was locked in cabinets and removed and made available as required. In some classrooms manipulative materials were arranged in centers - metrics, geometry, multiplication, division, fractions, etc. Many classrooms were adajacent to large storage areas. These rooms had special security locks and housed hardware from the Mathematics Resource Centers and other programs.

The Mathematics Resource Centers were coordinated by a Project Coordinator. Her duties included planning and scheduling the training of the teachers and paraprofessionals, conducting inservice and pre-sevice training, arranging for consultants to assist in the training, suggesting materials for use in the centers, assisting teachers in ordering supplies, assisting teachers with planning and implementing the program activities, confering with building supervi-

sors regarding the implementation of the program activities, monitoring program activities through scheduled school visits and on a daily basis, attending conferences concerned with innovative approaches to mathematics instruction, preparing reports for the program, and implementing the evalyation design.

Each Mathematics Resource Center was staffed by a Title I Teacher and Educational Assistant. The teacher was selected on the basis of seniority, desire to be in the program, previous classroom performance, and background in mathematics. The paraprofessional was selected according to seniority in the program. Initially, each paraprofessional demonstrated ninth grade mathematics ability on a standardized achievement test. Most staff members have been in the program for several years. All paraprofessionals have 60 hours of training.

Staff schedules conformed to the UFT contract and generally consisted of 24 teaching periods (8 classes, three times a week) of 40 minutes each. In one school, the teacher and paraprofessional volunteered to teach 33 periods to permit smaller teacher-class ratio, in any given period.

The teachers, with the assistance of the tax-levy teachers and the supervisors in charge of mathematics, selected the children for participation in the program. He/She supervised the administration of the District Diagnostic Mathematics Test and grouped and scheduled children to receive instruction in the Mathematics Resource Laboratory (under the supervision of the principal). Ledgers were prepared indicating students' needs. Individual pages were prepared indicating the prescriptions for each child in the program. The teachers set up the room, ordered materials and supplies, and developed a prescription box corresponding to items on the Diagnostic Test. The teacher dated completed skills on the individual student ledgers and helped the students to prepare work calendars and work folders. Module tests were used to periodically evaluate the students and update their records. The teachers also supervised the paraprofessionals.

The paraprofessionals assisted the teachers with the scoring of the Diagnostic Tests, the preparation of the room, the record-keeping, and the group instruction. Teachers and paraprofessionals continuosly consulted on prescriptions, students' progress and problems.

In September, the Mathematics Resource Teachers selected 105 children from their schools to participate in the program. The students were selected on the basis of test scores (MAT) and teacher-recommendation. Priority was given to students who were in the program before, holdovers, and those 2 years or more below grade-level in mathematics.

Individual records were maintained for each child in a ledger. The records indicated results on the Diagnostic Tests and the prescriptions. Pupil participation sheets contained pre-test and post-test scores for the program. A portfolio of work was maintained for each child in the program. The format varied for each school and included portfolios, folders, and looseleafs. A calendar was maintained in each child's folder. This indicated the task undertaken at each session.

Most staff members have benefitted from cumulative training based upon participation in the program from 1 to 4 years, Paraprofessionals have received a minimum of 60 hours of training.

In September, teachers and paraprofessionals participated in four days of intensive training. The intensive training sessions were conducted by the Diagnostic Prescriptive Arithmetic Program staff of Community School District 31. There was also additional training on specific record-keeping within the Mathematics Resource Center Program.

Once a month, teachers and paraprofessionals participated in joint-training-sessions. These sessions took place in the individual Mathematics Resource Centers on a rotating basis and were conducted by the Project Coordinator. A consultant demonstrated Chisanbop.

Supervision was done by the administrators for the five intermediate schools in the program. The Project Coordinator made monthly scheduled visits to each Mathematics Resource Center. In addition, she made scheduled visits to the schools immediately preceding the pre-testing and post-testing of the students in the program. Other visits were made as needed.

School building supervisors (Principals and Assistant Principals in charge of mathematics) made formal and informal supervisory visits to the Mathematics Resource Center and in all cases, the teacher supervised the paraprofessional within the Mathematics Resource Center.

The Mathematics Resource Centers established in each school contained math kits, manipulative materials, workbooks, textbooks, rexographed materials, filmstrips, soundfilms, and audiocassettes, calculators, and supplies. Since each teacher ordered his/her own materials there was a wide variety in the materials available. The most frequently used materials were math kits (McCormick Mathers, SRA, Houghton Mifflin, etc.), calculators (desk, hand, and Mathiputer), metric materials, boxed games, and commercial and teacher-made rexographed materials.

The activities seemed to be divided as in the elementary schools, into introducing concepts, practicing computation, and reinforcement of basic skills. Most of the work was done on an individual basis or in small groups of three or four children. Most children seemed to be working on the topics: metrics, multiplication, division and fractions. There was a heavy emphasis upon recording skills.

The children's folders served as a record of what they had done at each session. Many children began with instruction on number and numeration. There as a great deal of work done on mastery of multiplication, division, and computation with fractions. Puzzles, flashcard work, skill drills, use of computapes, specific cards and worksheets, and filmstrips were frequently recorded in the workfolders. In one center the children played group games to review many computational skills -

Monopoly and Crossnumber Puzzles. Many of the materials were self-checking. Metric activities were being used to teach measurement and to review basic computation.

The Mathematics Resource Teachers participated in the staff meetings of the Mathematics Department in their schools. In some of the schools, the Mathematics Resource Teacher had program time in which to consult with other teachers. In other schools this was accomplished on an informal basis or at staff meetings. Most of the Math Resource Teachers gave input toward a report card grade

3. Program Objectives and Data Analysis

In mathematics computaions, concepts, problem solving and total scores, the participants demonstrated achievement beyond expectation (p=.05) as measured by the appropriate level of Stanford Diagnostic Math Test. (See Table 28)

A total of 1,527 children in grades 3-8 participated. All students were pre-tested in October, 1977 with the Stanford Diagnostic Math Test, Form A. Post-testing took place the second of May, 1978. The USOE Model A-1 was used to analyse the data and has been reported separately by grade level.

In addition, one-hundred and twelve (112) students from grades 3 to 8 entered the program in January 1978, these students demonstrated mastery of the objectives listed in the SED classification index. The Stanford Diagnostic Math Test data has been reported in criterion referenced format.

Grade 3:	1102,	1104,	1111,	1108, 1113
Grade 4:	1102,	1104,	1111,	1108, 1109
Grade 5:	1102,	1104,	1111,	1113, 1501
Grade 6:	1102,	1104,	1108,	1109, 1903
Grade 7:	1102,	1104,	1108,	1109, 1903
Grade 8:	1102,	1104,	1109,	1110, 1903

All students were pretested in January 1978 and post-tested in June 1978. Analysis of data has been reported by grade level. (See tables 29-34).

4. Recommendations

a. Elementary Schools

1. It is recommended that teachers be given articulation time with classroom teachers instead of administrative duty.

2. It is recommended that the ratio of students to teachers be reduced in the classes with younger children (grade three).

3. It is recommended that the Mathematics Resource Center teacher act as a resource teacher in mathematics.

TABLE 28

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Math Res. Centers Program by Grade Level

(Name of Test: Stanford Diagnostic Math Test
Normal Curve Equivalent Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Numbers & Numeration	3	199	19.3	12.1	44.6	17.9	7	39	23.12
	4	199	24.3	11.3	43.6	16.9	11	38	16.77
	5	207	23.0	10.8	41.2	14.6	10	33	20.84
	6	257	23.7	11.7	32.6	14.7	11	20	10.40
	7	190	23.3	10.1	31.0	13.5	10	18	9.48
	8	143	22.7	10.6	28.6	12.5	9	16	7.45
Computations	3	199	26.9	14.6	46.5	21.2	14	43	14.35
	4	199	29.6	14.0	50.4	20.4	17	51	16.08
	5	207	26.6	13.2	44.0	16.5	13	39	18.00
	6	257	23.6	11.1	34.3	16.2	10	23	13.72
	7	190	25.6	11.1	35.1	15.2	12	24	10.69
	8	142	24.2	11.0	32.0	16.6	11	20	7.39
Applications	3	199	16.6	12.3	42.2	16.2	6	36	24.82
	4	199	22.6	11.2	33.2	16.9	9	21	8.14
	5	207	22.5	10.3	36.8	15.3	9	27	15.08
	6	257	17.9	11.7	30.0	11.3	6	17	14.09
	7	190	18.6	11.4	29.3	11.7	7	16	12.31
	8	143	20.7	10.8	28.4	12.2	8	15	8.70
Total Math	3	199	18.4	11.9	43.8	14.8	7	38	33.15
	4	199	24.4	9.8	43.7	14.8	11	38	20.68
	5	207	21.5	10.5	40.0	13.7	9	32	24.26
	6	257	19.6	8.0	31.1	11.9	7	18	19.72
	7	190	20.4	9.4	31.0	12.0	8	18	17.93
	8	143	20.0	10.1	28.2	12.9	8	15	10.64

TABLE 29

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math. Resource Centers Program

Name of Test: Stanford Diagnostic Math Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	8	19	21	6
1104	Decimal Place Value	6	21	18	9
1111	Operations and Properities	11	16	24	3
1108	Subtraction	6	21	13	14
1113	Number Sentences	12	15	15	12

1. Number of Students is 27.
2. Grade 3 Students.
3. These students entered the program in January 1978.

TABLE 30 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math Resource Centers Program

Name of Test: Stanford Diagnostic Mathematics Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	4	13	11	6
1104	Decimal Place Value	6	11	10	7
1111	Operations & Properities	2	15	13	4
1108	Subtraction	5	12	10	6
1109	Multiplication	12	5	13	4

1. Number of Students is 17.
2. Grade 4 Students.
3. These students entered the program in January 1978.

TABLE 31

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math Resource Centers Program

Name of Test: Stanford Diagnostic Mathematics Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	2	14	6	10
1104	Decimal Place Value	2	14	7	9
1111	Operations & Properities	3	13	4	12
1113	Number Sentences	2	14	9	7
1501	Reading & Interpreting Tables & Graphs	1	15	9	7

1. Number of Students is 16.
2. Grade 5 Students.
3. These students entered the program in January 1978.

TABLE 32

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math. Resource Centers Program

Name of Test: Stanford Diagnostic Mathematics Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	3	19	9	13
1104	Decimal Place Value	2	20	5	17
1108	Subtraction	5	17	10	12
1109	Multiplication	5	17	7	15
1903	Problem Solving	1	21	7	15

1. Number of Students is 22.
2. Grade 6 Students.
3. These atudents entered the program in January 1978.

TABLE 33

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math. Resource Centers Program

Name of Test: Stanford Diagnostic Mathematics Test
Brown Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	1	16	2	15
1104	Decimal Place Value	2	15	4	13
1108	Subtraction	2	15	6	11
1109	Multiplication	2	15	5	12
1903	Problem Solving		16	4	13

1. Number of Students is 17.
2. Grade 7 Students.
3. These students entered the program in January 1978.

TABLE 34 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math Resource Centers Program

Name of Test: Stanford Diagnostic Mathematics Test
Brown Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1102	Whole Numbers	8	5	11	2
1104	Decimal Place Value	3	10	5	8
1109	Multiplication	4	9	8	5
1110	Division	5	8	10	3
1903	Problem Solving	3	10	9	4

1. Number of Students is 13.

2. Grade 8 Students.

3. These students entered the program in January 1978.

4. It is recommended that the paraprofessionals be given additional opportunities to learn games to meet specific needs.

5. It is recommended that the use of the EPC computer printout be incorporated in the program.

b. Intermediate & Junior High Schools

1. It is recommended that there be more coordination with the tax-levy teachers. Perhaps some of these teachers can be brought into the lab or trained in the use of materials.

2. It is recommended that the teachers receive more training in the use of manipulative materials appropriate for the junior high school.

5. Conclusions

a. Elementary Schools

Instructively and administratively, the program was implemented and staffed as described in the proposal. The program was one of a diagnostic prescriptive approach where the assignment of one teacher and one paraprofessional to 12 to 15 children is important to proper functioning.

The teachers utilized a wide variety of materials and instructional activities. Many teachers developed their own materials to fill in gaps in programs and to provide additional motivational materials.

The teachers all felt that they made significant impact on the children's self-concept, work-habits, and attitudes as well as on their mathematics scores as indicated by differences between the pre-test and post-test scores.

Administrators indicated that they were generally pleased with the program and wished that it could have impact on more children and teachers.

The Math Resource Centers program should be continued, based upon consultant observations and analysis of data.

b. Intermediate and Junior High Schools

Instructionally and administratively the program was implemented and staffed as described in the proposal. The program was one of a diagnostic prescriptive approach where the size of the students group is important to proper functioning.

The teachers seemed to be comfortable with the procedures and the record-keeping system utilized in the program. The variety of prescriptions depended upon the teaching style of the individual teacher and paraprofessional. Some teachers tended to use a multimedia technique, others tended to rely upon printed materials.

Some of the teachers now use manipulative materials. Several of the teachers are utilizing the DPA activities; others feel that these games are too elementary for their students.

Teachers indicated that they learned techniques by visiting each others labs for meetings. This was particularly useful in learning to use equipment. Paraprofessionals indicated that they learned from the sharing sessions.

The teachers and the paraprofessionals considered the training to be good or excellent. They all indicated that working with children on a one-to-one basis was most beneficial.

Both the teachers and the paraprofessionals indicated that in addition to gains in scores, many of the children seem to have improved in their self-concept and their attitude toward mathematics.

Administrators indicated that they were generally pleased with the program and hoped that it would be continued or expanded. Several administrators would like to see more children able to receive instruction in a laboratory setting.

Based upon the consultant observations and the analysis of data, the Math Resource Centers program should be continued.

G. Creative Arts Alternative Program (5045-81658)

1. Description of the Proposed Program

The Creative Arts Alternative Program (CAAP) was a merger of the best features of the former Reading Through The Arts and Alternative Mini-Society programs of 1976-77. Through a variety of arts and remedial communications skills activities involving both Title I and tax-levy staffs, the CAAP program was to provide a virtual all-day instructional experience aimed at achieving Title I objectives.

Students were to be assigned to one of three reading centers, based upon diagnosed strengths and weaknesses.

The top third (1 to 1½ years below grade level) was to be assigned to the Arts Reading Resource Center, which was to be manned by one reading teacher and two educational assistants. Students were to through a"work-study contract" perform reading assignments, do research, and obtain tutoring services in the area of reading through the arts. A taxonomy by reading level, reading skill, and subject was to be utilized to prepare student's contracts.

The second third (1½ to 2 years below reading level) were to be assigned to the Communicational Skills Workshop which was to be staffed by a reading teacher and two educational assistants. The communication Skills Workshop was to encourage the participants to utilize the Workshop's Lending Library for private reading and special assignments and research.

The last third (2 to 2½ years or more below reading level) were to be assigned to the Phase One Workshop which was to be staffed by one reading teacher and two educational assistants who would provide the participants with small group instruction based on homogeneous grouping, individualized instruction and remediation based on the Fountain Valley systems. The Phase One Workshop was to also include the EDL Lab System to help the students develop and improve their reading skills.

The Reading-Art Workshop (4) (to include dance, art, classic guitar, and video) was to be conducted as a vehicle for motivating students to improve their reading and other communication skills. The arts workshops were to provide the student with creative experiences that would involve reading, listening, and generate speaking and writing. The students were to select the art workshop they wished to participate in. The instructional methodology to be used was the language experience approach. The arts workshops were to work closely with the Reading Workshops in sharing materials and experiences which the students will develop into Special Projects.

The Arts Production Center, staffed by the assistant coordinator/teacher and two educational assistants was to instruct students in production techniques, and serve as the center for printing, producing plays, and the exhibiting of the students' art works.

2. Description of the Observed Program

The Creative Arts Alternative Program was the only program which utilized the Arts and Humanities to teach the communications skills and reading. The Creative Arts Alternative Program provided continuous instructional experiences aimed at achieving Title I objectives.

Structurally, the program had three components; The Arts Reading Resource Center, Communications Skills Workshop and Phase One Workshop, Children were assigned to one of these components based on their reading levels.

Target students one to one and a half years below grade level were assigned to the Arts Reading Resource Center. One reading teacher and two educational assistants were in charge of the Arts Reading Resource Center.

Students involved in the program performed reading assignments through a "work-study contract". The contract covered research, tutorial services and reading or related reading activities. A wide variety of materials were available for students at the Reading Resource Center. At the center, students became involved in activities such as reading plays, writing poetry and short stories and printing a school newspaper.

Students one and a half to two years below reading level were assigned to the Communications Skills Workshop. Instruction was provided by a reading teacher and two educational assistants. Small group and individualized instruction was used to develop graphic skills, listening skills, speech skills and organizational skills. The Communications Skills Workshop was divided into three fifteen minute slots. Slot I was geared to teacher directed skills exercise. Content included punctuation, capitalization, spelling, vocabulary, abbreviations and specific usage problems. Slot II was designated for thinking and reading skills. Through the use of the In-Fact or Fiction, Inference, Finding Details, Analogies, and phonics. Each student had received a copy of the corresponding workbook for the Intensive Reading Program, which he/she kept for personal use. Slot III was devoted to Speech, Diction and Listening Skills. Children observed reading orally and discussing such plays as: "The Other Foot" by R. Bradbury, "Death After School" by J. Matas and "Matter of Price" by F. Gilroy. The dramas had been taken from the "Scholastic Play Series". Throughout the lessons, values were stressed through an emphasis on the necessity for order, logical procedure, and clear thinking before action.

The youngsters two to two and a half years below reading level were assigned to the Phase One Workshop. This workshop was also staffed with one reading teacher and two educational assistants.

The students in Phase One Workshop received intense and perhaps highly structured remediation. Fountain Valley and EDL Lab System materials were used to help students develop and improve their reading skills. Materials borrowed from the Workshop's Lending Library were used to encourage youngsters to read independently, to develop an appreciation for the written word, to develop good comprehension skills and to increase the youngsters' vocabulary.

The Arts Workshops in the Creative Arts Alternative Program had the tone of professional studies. These workshops included dance, arts, classical guitar and video taping. Techniques in these workshops were used as motivating devices to improve reading and communication skills.

An interview with the guitar instructor indicated that he demonstrated continuous encouragement based on pupil participation and progress in the area taught. The nature of the professional workshops was basically one of sharing, with professionals giving of their time and talent to encourage youngsters to learn. Interest levels were high; perhaps because students chose their activities and workshops rather than being forced to attend.

In the video workshop, a group of youngsters was in the process of making a commercial. Such an experience involved teaching and learning not only the basic language and communication skills but also, advanced skills in reading, writing, comprehension and public speaking. Youngsters also learned all of the "special" skills of the trade such as producing, writing scripts, taping, editing and lighting and stage techniques. Very creative and in-depth processes were used to introduce and develop basic reading skills to all of the children in each component or reading center.

Children in the video workshop anxiously read and explained their commericals, demonstrating a tremendous sense of pride and achievement. The approach used to instruct students in basic skills was the Language Experience Approach. Arts and Reading Workshops worked closely together in sharing experiences and materials used in developing reading competency.

The Arts Production Center was staffed by the assistant program coordinator/ teacher and two educational assistants. Students were instructed in production techniques. This center also served for exhibiting students' art work, provided space for producing plays and was used as a printing center. In one art classroom visited the students were busy working independently in a variety of mediums.

The students who were assigned to the Reading Resource Center, were tested with the California Achievement Test. Test results were used to prescribe specific instructional activities. As contracted work was engaged in and completed, educational assistants and Title I teachers assessed, and either provided activities for reinforcement purposes, or assigned new work to the students. Group assignments were made from Scope or Action magazines.

As indicated previously, the students assigned to the Communications Skills Workshops were divided into three, fifteen minute time slots. Each slot focused on coverage of specific skills and related reading activities.

Students, assigned to Phase I Workshops, were grouped homo-geneously according to reading grade. After diagnosis of needs, students were assigned individualized reading materials indicated on a computer print-out.

There was still need for integration of the arts into the basic skills program developed in the reading lab classes.

The program operated under the assumption that real interest and in-depth knowledge requires a real knowledge or competence in language and/or reading. All professional areas have their own terminology, a history to be read and digested and biographies which enhanced the study of special interest areas. The accomplishments and achievement therefore were two-fold; in the professional area and in the area of reading and language.

The following materials and equipment were in use at the program site: Fountain Valley Systems, EDL System, Aud-X, Tach-X, Musical Instruments (guitars), Movie Camera, Video Equipment, Various Art Supplies and equipment, Music, Barnell/Loft, McCall/Crabbe, SRA.

The competency of the educational assistants coupled with the expertise of the Title I teachers and the professionals involved, served the youngsters well.

The enthusiasm of staff and children played a tremendous role in educational achievement of the targeted children.

3. Program Objectives and Data Analysis

In total reading, the target population demonstrated achievement (p=.05) as measured by the Stanford Achievement Test, Reading sub-test, Intermediate Levels I and II. (See Table 35).

A total of 432 students participated (80 in grade 6, 146 in grade 7, 180 in grade 8 and 26 in grade 9). All participants were pre-tested in October 1977 and post-tested in May 1978. The USOE Model C-1 was used to analyze the data, and has been reported separately by grade level.

4. Recommendations

a. It is recommended that some concerted effort be made to make the youngsters aware of the process in which they are involved as it relates to the reading process.

Teacher and educational assistants are thoroughly capable of pulling out reading material or reading related experiences from creative undertakings. This may insure that students will be able to transfer these concepts or ideas when on their own.

TABLE 35

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Creat. Arts Alt. Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
6	74	21.3	14.9	27.9	12.9	8	15	6.26
7	146	17.2	14.4	28.3	11.6	6	15	13.13
8	178	18.6	14.0	29.4	13.6	7	16	14.25
9	26	17.1	11.9	23.1	14.8	6	10	3.93

5. Conclusion

The Creative Arts Alternative Program has undoubtedly had a positive effect on all participating youngsters. The competency of the educational assistants coupled with the expertise of the Title I teachers and the professionals involved, served the youngsters well. The enthusiasm of staff and children played a tremendous role in educational achievement of the targeted children. Based upon the analysis of test data and the consultant's positive impressions, it is recommended that the program be continued.

H. Bilingual Language Lab (5045-81659)

1. Description of the Proposed Program

A bilingual language lab was to be established in each of six intermediate and junior high schools to provide supplementary language instruction for those students who have limited ability in English. The lab was to be equipped with a wide variety of multi-media materials which were to be used to provide small group and individual instruction to the participating students in the areas of English as a Second Language, Bilingual Methodology.

In the ESL component, students were to be selected to participate in ESL lab activities based on the results of the English version of the LAB (Language Assessment Battery) administered in April 1977. Those students who fell below the 20th percentile were to be chosen for the ESL component of the lab. The following instructional sequence was to be followed in ESL lab activities: Listening and Speaking, Reading, Writing and Independent Study.

In the Reading component (English and Spanish) the methodology described below was to be used. Children were to participate in one or the other, not both. Those students who scored above the 10th but below the 20th percentile of the English version of the LAB test were to be selected to participate in the English Reading component. Those students who scored above the 20th but below the 50th percentile of the Spanish version of the LAB test were to be selected to participate in the Bilingual Methodology.

A great variety of audio-lingual tapes and materials were to be utilized to provide instruction in the fundamental reading skills. A multi-media approach was to be used to motivate older students to master fundamental reading skills. Students were to be tested to diagnose specific strengths and weaknesses. An individualized high-interest reading program (Clues to Reading) was to be used to remediate these skills deficiencies.

Seventy-five students from each school were to be selected to participate in the program. They were to be grouped on the basis of their ability in English and Spanish in groups of no more than 15 at a time.

ESL and English Reading groups were to receive three forty-minute periods of lab instruction a week for a total of 120 minutes a week. The Bilingual Methodology group was to be programmed for one or two 40-minute periods a week, depending on scheduling arrangments and/or students' needs.

2. Description of the Observed Program

The Program took place in a lab setting and the facilities available were excellent. The rooms were quite spacious and usually divided into three areas, one for each of the three groups which normally received instruction. There were also a materials area or library area in most places, and ample additional space for equipment. The labs were spotless, bright and cheerfully decorated. The staff and students seemed to take pride in and be very pleased with their surroundings. The atmosphere was definitely conducive to the teaching and learning process.

The project staff consisted of six bilingual teachers, twelve educational assistants, a project coordinator and a supervising stenographer. The bilingual teachers' duties included: providing instruction to the students; grouping and scheduling students with the assistance of school supervisors; suggesting materials for use in the lab; preparing instructional materials; supervising paraprofessionals and assisting with their training; meeting with regular classroom teachers for one period twice a month to coordinate activities and to discuss student progress; maintaining a record-keeping system. The educational assistants assisted the teachers in all instructional activities and record keeping. Under the supervision of the teacher, they provided small group and individual instruction. They met with the bilingual teachers for one period every day for joint planning. The Project Coordinator coordinated all program activities. Her duties included: planning and scheduling training for all staff in the Program; conducting pre-service workshops; conducting in-service training at sites through workshops as need arose; visiting schools a minimum of twice a month to assist with on-site problems; ordering of supplies after consultation with teachers; preparing and submitting all reports required for the Program; implementing the evaluation design; conferring with Principals regarding the implementation of Program activities; attending conference and meetings related to innovative language instruction; and developing forms for recordkeeping.

The working relationship between the Project Coordinator, the bilingual teachers and the educational assistants was excellent. Staff schedules were available.

Approximately 75 students were serviced in each of the four intermediate schools visited. Students were chosen to participate in ESL lab activities who fell below the 20th percentile of the English version of LAB (Language Assessment Battery) administered in April, 1977. Those students who scored above the 10th but below the 20th percentile were selected to participate in the English Reading component. Those students who scored above the 20th but below the 50th percentile of the Spanish version of the LAB test were chosen to participate in the Bilingual Methodology component. Where necessary, modifications were made based on first-hand contact with the students and individual evaluations. Individual pupil records and test data were maintained. Pupil schedules and participant lists were also available.

Monthly two-hour training sessions were held by the Project Coordinator, with the joint participation of the bilingual teachers and the assistants. These sessions were conducted at selected sites. The sessions centered on topics related to developing skills in the four ESL areas, reading activities in English and Spanish, and writing activities in English. There were also discussions of methods, techniques, and materials. A need seemed to exist for
for the educational assistants, in order to allow for a concentration on aspects of the training more particularly related to them and also to encourage greater participation on their part.

On-site supervision was provided by the school Assistant-to-Principal in charge of Bilingual Education. Supervision of educational assistants was provided by the bilingual teachers. The educational assistants always worked in the presence of the teachers, and there was ample evidence of prior planning as well as active assistance on the part of the teachers during instructional activities.

The Bilingual Language labs were amply supplied with materials and equipment. The materials most used were a classics reading series in comic-book format which combined reading, seeing, and listening, as the students listened to the stories (The Hunchback of Notre Dame, for example) as they read. A film strip accompanied the readings. These were extremely successful materials, because of the quality of the adaptations. their careful, step-by-step reading guidance, their very effective and interesting exercises, and their multi-media approach. These formed the core of the materials used for the English Reading component. For ESL, the basic materials were English for a Changing World, and some of the Dixon texts, though other materials were frequently used, including materials which used a multi-media approach. These materials were also very good. For the Spanish or Bilingual Methodology component, there was a great deal of material available but it had not yet been organized into a cohesive program of instruction in most cases. There also seemed to be a lack of materials for this component which actually emphasized a multi-media approach. The equipment available for the labs as a whole was quite sufficient.

There were essentially two approaches applied in the labs. One involved concentrating on one component at a time, so that during a given period all students were receiving instruction in, say, English reading. The other approach involved dividing the students into three groups and focusing on all three components at the same time, with the teacher and the assistants each leading a group. Both approaches were successful. Since all the students were bilingual with the same native language, and since the labs were very large, carrying on three different activities in two different languages did not present any difficulties.

When students came into the lab, they were divided into three groups of about five students each. In most cases the teacher and each of the assistants concentrated or specialized in one area, rather than try to give instruction in all three. The teacher normally gave instruction in English reading, while the assistants each gave instruction in ESL or Spanish. Usually a standard routine had already been worked out for the groups, so that students came in knowing what they were expected to do. In most cases, students sat in their respective groups and immediately proceeded to use the material and the equipment which had already been set up in each area. There was a high degree of organization and discipline in all of this, which did not in the least detract from the atmosphere of relaxation which prevailed during these sessions.

Most lessons involved the use of a multi-media approach with reading text, sound-track and pictures and/or film strips. In one typical English reading activity, students were given a general introduction to a story and after some discussion proceeded to read the story while listening to it with individual earphones. Since most of the students were English dominant, this approach was very helpful in aiding the development of reading fluency and pronunciation, as well as in the areas of reading comprehension. Students seemed to enjoy reading and listening to the stories immensely. Reading/listening was followed by various activities dealing with the usual reading skills.

In another typical activity in ESL, students took turns to read a story outloud, with the educational assistant helping with pronunciation and discussing new vocabulary as it arose. Comprehension questions, vocabulary and other types of exercises constituted the follow-up activities. The Bilingual Methodology lesson at times involved reading an illustrated story in Spanish first, and after the students had assimilated its content, reading it again in English. This was very effective both in easing the students' approach to the language in the English version. and in reinforcing vocabulary and various reading skills in both languages. This particular methodology showed itself to be very appropriate for students able to read in Spanish whose level of progress in ESL was not yet sufficient to attempt actual connected reading in English without the bilingual prop. These were the students who were still on a beginning level of ESL requiring almost exclusive aural-oral work.

Except for one school where the program started late and was still in the early stages of organization, the instruction in the Bilingual Language Lab Program was found to be superior. The materials were for the most part excellent, the teachers and assistants highly competent and well-prepared, and the environment very encouraging to learning. Students as well as the staff showed a great degree of interest and enjoyment in the learning activities and their interaction was commendable. In many ways, the Bilingual Language Lab combined the best elements of a lab, a classroom, and a home environment. Students who because of their deficiencies in English and for a variety of related reasons might have found it difficult to converse, read outloud, or ask questions in English in some other setting, found in the lab a most encouraging atmosphere. This, combined with the multi-media approach and the small group and individualized instruction, formed the basis for the success of the program in implementing its objectives of supplementary instruction in the prescribed areas.

The supplementary nature of the program required coordination with the other tax-levy programs, and such coordination was effected. Bilingual teachers met with regular classroom teachers for one period twice a month to coordinate activities and discuss student progress. Bilingual teachers and assistants evidenced an acquaintance with the learning activities and progress of their students in their regular classrooms. A high degree of interest in the relationship between the program and the students' regular classes was demonstrated by them as well as by the Principals, who found the program essential because of its unique features as a supplementary program.

3. Program Objectives and Data Analysis

a. Children participating in the ESL and bilingual methodology components achieved beyond expectation ($p=.05$) in language arts skills measured in normal curve equivalents using the Language Assessment Battery. Most participants were pre-tested in October 1977, while some were pre-tested in February 1978. All participants were post-tested in June 1978. Data for each grade level will be analyzed and reported separately. (See Tables 36 & 37)

b. Children participating in the ESL and bilingual methodology components (for 8 months) made a significant gain ($p=.05$) in listening, speaking, reading and writing as measured by the respective sub-tests of the Language Assessment Battery (See Tables 38 & 40). Most participants were pre-tested in October 1977, while some were pre-tested in February, 1978. A t-test for correlated means was to be used to measure the significance of the differences.

TABLE 36

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling. Lang. Lab Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Months of Treatment	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
8 months	6	47	6.5	6.8	10.2	9.3	2	3	2.83
	7	69	7.8	8.3	13.8	11.6	2	4	5.36
	8	90	4.9	6.9	17.6	17.6	2	6	6.77
4 months	6	8	6.5	9.5	11.8	13.9	2	3	2.65
	7	16	3.4	5.4	10.4	10.6	1	3	4.05
	8	9	3.5	3.0	10.5	16.9	1	3	1.44

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TABLE 37

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling Lang Lab Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Months of Treatment	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
8 months	6	24	7.2	7.4	8.8	9.7	2	3	0.93
	7	24	7.0	9.1	10.3	10.5	2	3	2.52
	8	30	3.5	5.1	14.1	13.6	1	4	4.44
4 months	6	2	1.0	0.0	8.6	2.6	1	3	4.08
	7	4	3.8	3.3	6.9	4.9	1	2	1.73
	8	3	6.4	9.4	1.0	0.0	2	1	-1.00

Bilingual Language Lab
ESL Component
8 month treatment

TABLE 38

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling. Lang. Lab. Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	6	47	17.6	6.8	21.6	4.5	3.97
	7	69	15.9	6.6	18.9	4.2	3.62
	8	90	14.0	5.1	19.6	5.7	8.56
Reading	6	47	9.8	5.5	12.9	4.9	3.50
	7	69	10.9	5.1	12.4	3.6	2.87
	8	90	9.3	4.4	14.6	5.9	7.71
Writing	6	47	8.5	5.4	11.7	4.6	4.49
	7	69	8.5	4.1	9.7	3.2	2.60
	8	90	6.7	4.0	11.0	4.6	8.74
Speaking	6	47	7.1	5.3	8.8	4.2	3.36
	7	69	6.4	4.7	9.8	4.0	7.01
	8	90	5.4	5.3	9.9	4.1	9.24

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Bilingual Language Lab
ESL Component
4 month treatment

TABLE 39

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling Lang Lab Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	6	8	14.6	6.2	19.6	3.7	3.50
	7	16	13.5	4.8	19.1	4.7	3.90
	8	9	15.9	6.9	17.8	6.4	0.97
Reading	6	8	11.2	6.5	12.6	7.5	1.33
	7	16	9.1	4.4	10.6	4.8	1.15
	8	9	9.6	5.9	12.7	7.4	1.44
Writing	6	8	9.7	5.5	12.3	4.5	3.29
	7	16	7.2	4.0	9.5	4.8	3.28
	8	9	5.1	3.1	8.1	4.7	1.73
Speaking	6	8	4.4	5.0	8.0	4.4	3.58
	7	16	6.2	4.0	6.9	4.5	0.67
	8	9	4.4	4.7	7.2	4.2	1.45

Bilingual Language Lab
Bilingual Methodology Component
8 month treatment

TABLE 40

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling Lang Lab Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	6	24	18.5	7.1	20.9	4.9	1.89
	7	24	13.7	6.8	18.4	4.1	3.00
	8	30	12.1	5.9	18.7	4.3	5.13
Reading	6	24	9.8	5.3	12.4	4.3	2.45
	7	24	10.3	6.2	11.4	3.6	1.03
	8	30	7.9	5.0	13.2	4.9	5.50
Writing	6	24	8.9	5.2	11.3	4.0	2.60
	7	24	7.6	4.7	9.0	3.3	1.87
	8	30	5.6	4.2	10.1	4.2	6.47
Speaking	6	24	7.8	5.6	9.2	3.8	1.88
	7	24	5.5	4.4	9.5	3.5	6.14
	8	30	5.1	4.9	9.3	4.0	5.70

TABLE 41

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Biling Lang Lab Program by Grade Level

(Name of Test: Language Assessment Battery Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	6	2	18.5	0.7	19.0	1.4	0.33
	7	4	14.2	4.3	14.7	7.1	0.26
	8	3	19.3	7.8	17.7	3.8	-0.32
Reading	6	2	11.0	4.2	15.0	1.4	1.00
	7	4	10.7	3.5	8.0	5.3	-1.06
	8	3	7.0	5.0	8.7	1.5	0.51
Writing	6	2	6.0	1.4	11.0	1.4	9.00
	7	4	5.7	3.2	8.2	5.4	1.99
	8	3	5.0	2.0	9.3	2.3	2.46
Speaking	6	2	5.5	5.0	10.0	0.0	1.29
	7	4	8.7	1.7	7.5	5.1	-0.59
	8	3	7.3	6.6	8.0	2.6	0.26

TABLE 42 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2106	Vowels; Single Letters	12	20	15	17
2205	Syllables	19	13	27	5
2304	Word Meaning	5	27	15	17
2403	Inferences	15	17	17	15
2404	Facts & Details	15	17	18	14

1. Number of Students is 32.
2. Grade 6 Students.

TABLE 43

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2107	Vowels: More than one Letter	4	57	16	46
2205	Syllables	41	21	59	3
2304	Synonyms	13	49	38	24
2403	Inferences	15	47	36	25
2406	Main Ideas	17	45	38	24

1. Number of Students is 62.
2. Grade 7 Students.

TABLE 44 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2107	Vowels: More than one Letter	7	57	17	44
2205	Syllables	33	28	44	17
2304	Synonyms	15	46	32	29
2403	Inferences	16	45	33	28
2406	Main Ideas	22	39	42	19

1. Number of Students is 61.
2. Grade 8 Students.

Since appropriate normative data is not available, raw scores were used. Data for each grade level were analyzed and reported separately. (See Tables 38 through 41). It is apparent from Tables 39 and 41, the short term treatment of 4 months for ESL and Bilingual Methodology Components did not achieve the same amount of success.

c. Children participating in the English reading component demonstrated mastery of the objectives listed in the SED classification index. Stanford Diagnostic Reading Test data has been reported in criterion referenced format (See Tables 42-44).

Grade 6: Phonetic Analysis: 2106
Vocabulary: 2305
Structural Analysis: 2205
Comprehension: 2403, 2404

Grade 7: Phonetic Analysis: 2107
Structural Analysis: 2205
Comprehension: 2403,2406

Grade 8: Phonetic Analysis: 2107
Structural Analysis: 2205
Vocabulary: 2304
Comprehsnion: 2403,2406

All participants were pre-tested in October 1977 and post-tested in May, 1978.

4. Recommendations

a. It is recommended that arrangments be made for separate orientation and training sessions for the educational assistants, in addition to the present monthly sessions held jointly with the bilingual teachers.

b. It is recommended that an evaluation of the materials in Spanish currently available be made by the staff to determine which have been found to be the most effective and the sequence in which they can be most appropriately used.

c. It is recommended that the acquisition of more Spanish or bilingual methodology materials using a multi-media approach be considered.

5. Conclusions

In summary, the Bilingual Language Lab Program was effectively implemented according to the proposal. The program's objective of providing supplementary instruction in the designated areas through a multi-media approach emphasizing small-group and individualized attention was very successfully met as could be determined by the nature of this evaluation. Students were receiving supplementary instruction impossible to achieve in their regular classrooms, and they seemed to be highly motivated and challenged by the approach and appeared to be making progress in their respective areas. It is recommended that the Bilingual Language Lab program be continued and, where, possible, expanded.

I. Non-Public School (5045-81660)

1. Description of the Proposed

This program was to serve 336 students from grades 1st to 8th who had deficiencies in reading or students for whom English was a second language. The Non-Public School was to effect change in the following ways:

a. The ESL component was to focus on the oral language and reading skills of eligible non-public school children for whom English is a second language. These students in grades 1-5 were to be referred to the Title I Bilingual teacher assigned to the school. The children were to be scheduled daily for one hour instruction at S. Anselm's and two days a week at St. Adalbert. Children in grades 1-4 from the eligibility list were to be selected. A fifth non-graded group was to be formed with the non-English speaking children in grades 5 and 6. Each lesson was to involve participation in ESL and reading activities. Models were to be presented by the teacher, or prepared audio-visual materials.

b. The Reading component was to focus on reading skills of eligible children in grades 1-5 selected from the non-public school eligibility list. The maximum number of children per group was to be fifteen. The groups were to meet daily for one hour a day. Each child was to be diagnosed using the Informal Reading Inventory and prescriptions determined and implemented to meet the needs of each child using a variety of materials. A reading teacher was to be assigned to Sts. Peter and Paul to plan and implement the above activities.

c. The Supportive Services component was designed to enhance the successful functioning of the pupil in the instructional components by working with participating pupils, their parents, their teachers and the Title I teachers to individualize the project's impact. The services provided by the Social Worker were to vary according to pupil needs and particular circumstances. The Social Worker was to be assigned to work three days a week and visit each of the three assigned schools every week.

d. The Paraprofessional component was to utilize the services of educational assistants or teacher aides who were to be assigned to Immaculate Conception, St. Luke and St. Pius V. They were to assist the Title I Reading teachers assigned to these schools under the Central Board Corrective Reading Program for non-public schools. Students were to receive instruction for 45 minutes three times per week.

The staff required to implement this program will include one ESL teacher/coordinator, one ESL teacher, one Reading teacher, one school Social Worker and three educational assistants.

2. Description of the Observed Program

The program was implemented in September according to the submitted proposal. The program took place in classrooms that were each decorated displaying children's current work as well as instructional aids relevant to on-going work. Each room

was used to allow some flexibility of grouping according to the different lessons. One notable exception was in Reading component where the small space assigned to the program required limiting class size to ten students and severely limited the flexibility of grouping for use of the audio-visual materials available.

Approximately 360 students in grades 1-8 were served by the non-public school component.

The reading teacher, assigned to School A tested each child using the Informal Reading Inventory. Prescriptions were determined and implemented which met the needs of each student. The reading teacher geared learning activities towards the skills in need of mastery. Emphasis was placed on decoding, mastery of sight words, and other specific skills. Students were taught either in small groups or individually.

The following basic skills were part of the reading activities implemented: alphabet and sound letters, colors and shapes (grade 1); sight vocabulary; word attack; dictionary skills; comprehension skills; categorizing and sequencing; as well as pronunciation and enunciation; linguistic proficiencies; visual perception and writing.

The Reading teacher provided individual or small group instruction to the students with the use of multi-media materials. Each period was divided to include teacher directed activities, whole group instruction, small group or independent student work and individual instruction according to the needs of each child. A period of each class was also devoted to sustained silent reading by the children of individually chosen materials.

The ESL teachers assigned to Schools B and C tested the students with the Dolch Basic Sight Vocabulary (grades 1 and 2) and the Harris and Botel Graded Word Line (grades 3-5). The students were grouped according to the results of these tests as well as teacher made skills mastery tests.

The ESL teachers worked with students on the development of oral language skills as well as reading skills.

In the development of oral language skills, much of the instruction was one of free conversation with references to basic curriculm and real life experiences. With this in mind, the ESL teacher directed the teaching of selected vocabulary and structural dialogue. A typical approach in free conversation included the teacher's model preceding each pupil's response, followed by the pupils' response as a total group, then as a small group and eventually on an individual basis. Attention was given to the correction of sounds, rhythms, intonation and stress in addition to the audio discrimination of consonants and vowel sounds. To motivate students, the ESL teachers used games, songs, puppets, and other cultural activities to reinforce language skills. Attention was paid to the holidays as they came up and lessons were planned that presented vocabulary and activities appropriate to each holiday and season.

When the ESL teacher worked on the reading activities the diagnostic-prescriptive approach was followed. The reading activities, while skills oriented and supplementary to the regular school reading program, emphasized oral language

development. The classroom teacher and the Title I teacher worked closely to implement appropriate remedial activities.

The three educational assistants provided small group and individualized instruction at Schools D, E and F, working with students assigned to the Title I Central Board Teachers in Reading and ESL, and at Schools A, B and C, assisting the Title I Reading and ESL teachers from District #7.

The Supportive Services Component which utilized the services of a school social worker was implemented as of January 3, 1978. This aspect of the component was not implemented earlier, since the Central Board was unable to locate a Bilingual (Spanish speaking) Social Worker. The services provided by the Social Worker included counseling with pupils and groups, contributing to the diagnosis of learning difficulties and suggesting alternative approaches, consulting and collaborating with teachers and other staff members, and enlisting the assistance of parents and other resources.

There was a three day pre-service training session for the teachers and educational assistants. The training was provided by the ESL teacher/coordinator. These sessions provided description of the program, objectives, instructional activities, job descriptions, record keeping, diagnostic approaches to Reading and ESL.

There were also seven in-service training sessions on a monthly two hour basis, as well as seven all-day workshops.

The in-service training sessions for all staff began in November and were held monthly. The full day sessions have included workshops on the techniques used in individualized instruction and the administrationa and review of new audio visual equipment and materials. District office personnel with expertise in specific areas offered workshops to program personnel. Two meetings were offered by the New York State Education Department at the World Trade Center presenting information from the Right to Read Leadership Training Program and the Bilingual Reading Impact Program. Workshops were also offered by the Bilingual Resource Trainers Center at the Central Board of Education. Efforts were made to hold the meetings in different classroom sites. This enabled the teachers to share their individual ideas regarding the implementation of the program.

At the beginning of January, 1978, meetings were held, one at each of the schools serviced by the Special Services Component, with parents of the program's participants to introduce the school Social Worker and the insuing services to be provided.

The teachers assigned to the project met, bi-weekly with the classroom teachers to discuss the progress of the participating students and to exchange information concerning students' needs.

The ESL teacher/coordinator in addition to her teaching duties, conducted field visits to monitor staff activities and offer on-site training, In consultation with the staff, she ordered supplies, conducted staff meetings, attended Title I staff meetings, implemented the evaluation program, prepared progress reports, developed curriculm materials, arranged for and conducted staff training, reviewed teacher and paraprofessional logs and served as liaison to non-public school principals.

TABLE 45

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Non-Public School Program by Grade Level

(Name of Test: Bilingual Syntax Measure Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
1	17	2.8	I.0	4.0	0.4	4.93
2	19	3.2	0.9	4.2	0.6	4.47

TABLE 46

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Non-Public Schl Program by Grade Level

(Name of Test: Basic Language Competence Battery (Cervenka) Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
3	18	109.9	10.8	115.7	10.9	2.26
4	18	120.9	9.2	121.9	11.8	0.55
5	10	119.8	8.6	126.1	6.7	2.00

TABLE 47

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Non-Public Schl Program by Grade Level

(Name of Test: Stanford Early School Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
1	8	26.7	24.8	29.6	12.1	13	17	0.35

TABLE 48

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Non-Public Schl Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	7	40.6	8.9	42.5	13.7	33	36	0.42
3	6	33.5	5.8	30.9	10.1	22	18	-1.08
4	6	25.8	6.1	28.4	2.5	12	15	1.20
5	10	37.1	9.6	32.6	7.6	27	20	-2.22

TABLE 49

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Non-Public Schl Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	44	32.8	11.5	36.0	10.8	21	25	2.69
3	33	23.0	10.0	38.1	8.2	10	29	10.12
4	37	28.4	13.2	37.4	12.3	15	28	5.60
5	33	24.8	11.8	36.4	11.4	12	26	5.50
6	31	27.7	13.4	38.1	13.2	14	29	5.77
7	31	26.4	15.0	34.6	11.7	13	23	4.92
8	11	29.1	10.5	38.1	8.68	16	29	4.55

3. Program Objectives and Data Analysis

a. In the ESL component, participating students made a significant gain ($p=.05$) in oral language achievement as measured by the Bilingual Syntax, in grades 1 and 2 (See table 45) and by the Cervenka Language Assessment Battery, grades 3 and 5 (See table 46). A total of 93 children in grades 1-5 have participate in this activity. All children were pre-tested in October, 1977 and post-tested in May, 1978. For the ESL tests, a t-test for correlated means was used to determine the significance of the difference.

b. In the Reading component, children in grade 1 did not demonstrate achievement beyond expectation ($p=.05$) in normal curve equivalents as measured by Stanford Early School Achievement Test (II) (See table 47). Ten children participated and were pre-tested in October, 1977 and post-tested in May, 1978. In the Reading component, participating children in grades 2-5 did not demonstrate achievement beyond expectation ($p=.05$) in total reading, as measured by the appropriate level of the Stanford Achievement Test (See table 48).

The analysis of data using NCE scores did not demonstrate that significant achievement had taken place. However, it also did not take into account that 21 of the 33 students had been heldover. In previous years, an evaluation method referred to as "the historical regression analysis" was instituted. This method compared the actual and predicted post-test grade equivalent scores for each student. The predicted post-test grade equivalent scores were obtained by generating a rate of growth for each student. The rate of growth took into account the student's pre-test score, the number of years that the student had been in school as well as the amount of treatment. Thus if a student had been held over, his rate of growth in grade 5 would be different from a student in grade 5 who had not been held over.

The numbers of students at each grade level are not large enough to permit for meaningful analysis. A total of 33 children in grades 2-5 participated in this component. All children were pre-tested in October, 1977 and post-tested in May, 1978. The USOE Model A-1 was used to analyze data by grade level and reported separately.

c. In the Paraprofessional component, participating children in grades 1-8 demonstrated achievement beyond expectation ($p=.05$) in reading, as measured by the appropriate level of the Stanford Achievement Test (See table 49). A total of 225 children participated. All participants were pre-tested in September, 1977 and post-tested in May, 1978. The USOE Model A-1 was used to analyze data by grade level and reported separately.

4. Recommendations

a. It is recommended that the Supportive Services Component be implemented at the beginning of the school year.

The Supportive Services Component was not implemented until the beginning of January.

b. It is recommended that the services of a psychologist as consultant be available to the Supportive Services Component of the Program.

Many excellent materials are available to teachers through the Bilingual Resource Center at the Board of Education in Brooklyn. However, it is extremely difficult for individual teachers to make arrangements to obtain these materials. It is recommended that the District Office might be able to make arrangement for some appropriate materials to be borrowed en masse for use by program teachers.

c. It is recommended that a separate analysis be done of the holdover students vs. the non-holdover students.

In addition, it is recommended that a different type of statistical procedure be implemented which will take into account the holdover status of participating students.

In this manner, a more accurate picture of the program's assessment can be rendered.

5. Conclusions

The Non-Public School Program has been effectively implemented according to the Title I proposal and should be continued.

J. Parental Involvement Component (B/E: 5045-81661)

1. Description of the Proposed Program

This component was designed to comply with the Public Law 93-380. This law mandates the formation of: 1) A Parents Advisory Council in every school that receives services from Title I Programs, 2) A district-wide Parents Advisory Council, including representation from the public schools, non-public schools, and education related community organizations.

The members of the District PAC were to meet at least twice a month to carry out their mandated activities in helping to plan, implement, and evaluate Title I programs in the District.

2. Description of the Observed Program

a. In compliance with the P.L. 93-380 the Community School Board - 7 mandated the formation of a Title I Parents Advisory Council for school year 1977-78. The mandate included the following:

1) Formation of School Advisory Council in each school, whose members are parents of students participating in Title I programs and parents of eligible non-public school students who lived in the school zone, representatives from para-professionals, teachers, administrators and the Parents Association, and various community organizations.

2) Formation of a District-Wide Parents Advisory Council comprised of representatives from each of the district schools PAC and representatives from each of the following organizations: UFT, CSA, Parents Association Presidents Council, Non-Public Schools, ASPIRA Bronx, NAACP, United Bronx Parents, Hunts Point Community Corp., South Bronx Community Corp., South Bronx Urban League, South Bronx Model Cities Scholarship Awards Program, Hostos Community College, Lehman College and a Title I Office Liaison.

All district schools organized a PAC and designated representatives to the district-wide PAC. The Parents Association Presidents Council, the Non-Public Schools and four community organizations were also represented. The total PAC register consisted of 32 members. The Title I Office Liaison was available and served as a resource person at school PAC meetings.

b. The District PAC had the responsibility of assisting in the planning and evaluation of all Title I programs. This year members of the PAC visited the existing programs and gave feedback to the group as to the implementation of the programs in their schools and in the schools they visited. They reviewed all proposals submitted for funding under Title I for 1978-79, reviewed the budget, and made their recommendations to the C.S.B.-7. All PAC members had the responsibility of serving as a liaison between their schools, organizations and the District PAC.

c. The school PAC meetings were scheduled on a monthly basis. The District PAC meetings were scheduled every other Thursday for two and a half hours, 9:30 a.m. to 12:00 noon. The District PAC met a total of 40 times during the year and many meetings ran beyond the scheduled closing time. There were eight workshop sessions scheduled on alternate Thursdays; the review of programs submitted for funding under Title I and the planning for the Title I Parents Conference required several extra meetings. The Title I Liaison attended all meetings and served as a resource person. All meeting minutes and most materials were bilingual, English-Spanish, to insure participation by all members.

1) The PAC planned a series of 8 workshops on Title I, for members and other interested parents. The workshops covered all aspects of Title I, the law, funding, eligibility, priorities implementation, evaluation and parent involvement. In addition, all program coordinators were invited to demonstrate the functioning of their program. Several school PAC members and parents who were not PAC members participated in the workshops. The workshops were conducted by the Title I Director and Assistant Director, who is the Title I Liaison to the PAC.

2) Members of the District PAC attended several conferences relevant to Title I during the school year. Two members attended the Title I Parents National Conference in Washington, D.C. The Chairman attended the New Jersey Title I Parents Conference. The Chairperson and/or one alternate attended most of the city-wide PAC meetings. After each conference the members were required to submit a written report to the PAC and to give an oral report in order to share their experiences with the other members.

d. The final activity of the year was an all day conference sponsored by the PAC for all Title I parents. This conference consisted of workshops presented by each Title I program. In addition, the PAC invited all the other funded programs in the district to participate. The theme of the conference was "Parents and School United for Our Childrens' Education". This activity was planned, organized, and carried out by the PAC and assisted by the Title I Office. Committees were formed to handle each aspect of the activity, publicity, registration, invitations, food, etc. The activity took place at I.S. 139 on Saturday, May 6, 1978, between 9:00 a.m. and 3:00 p.m. A total of 25 workshops were in operation during the workshop sessions. Lunch was provided for the participants. Most workshops were experiential and "hands on". The visiting parents experienced the same activities that their children experience in the different programs. Each workshop prepared materials which parents could take home and use to help their children. Approximately 400 parents attended the conference.

3. Program Objectives and Data Analysis

1 A record of representatives was maintained; the procedures for obtaining representatives has been reported including all relevant dates.

2. Attendance records were kept. The percent of members (or designated alternates) attending at least two-thirds of sessions was reported.

3. An interview questionnaire was developed dealing with Title I regulations and programs. PAC members were randomly selected for interviews. Their responses were tabulated and analyzed. The objective was judged to have been met since the average response indicates knowledge of 75% of the items.

4. A scale type of questionnaire was developed and was sent to Principals, School PAC members and Community agencies.

   The questionnaire contained a variety of items related to the process of obtaining information via the PAC representative. Each item had five choices, from poor to excellent, which were translated into scores of one to five. For each questionnaire, the item scores were added and divided by the number of items. The criteria for success was that 75% of the scores would be above 3.5.

   In addition to the above members of the PAC were interviewed to determine how they felt in terms of participation, in particular how they felt about their ability to affect the decisions made with regard to Title I Programs. These responses were tabulated and reported.

Forty representatives and their alternate from schools and various parent and community groups were members of the District-7 PAC.

The representative breakdown was as follows:

30	representatives and their alternates from	24 schools
1	" " " "	" N.P.S.
3	" " " "	" Local & Community
3	" " " "	" P.A.President Association
37		

The total number of persons expected to represent the District PAC was thirty-three.

24	representatives from	schools
1	"	" N.P.S.
3	"	" Local & Community Organizations
3	"	" P.A. President's Council
1	"	" Title I Office Liaison
1	"	" U.F.T.
33		

The Title I Office Liaison person attended every meeting, workshop and conference; however, this person was not included as a representative of the District PAC.

At each of the regularly scheduled meetings throughout the year, formalized attendance sheets were signed by the representatives.

The attendance records were uniform and precise. Each attendance record accompanied the minutes for its corresponding meeting.

There were 40 scheduled meetings, 8 workshops, and one district-wide conference.

The number of meetings, workshops, conferences were held as follows:

TABLE 50

MONTH	#per Month Meetings	#per Month Workshops	#per Month Conference
July	0		
August	0		
September	2		
October	2		
November	1		
December	4		
January	5	1	
February	3	1	
March	5	2	
April	8	4	
May	6		1
June	4		
TOTAL	40	8	1

The following table represents the average number of representatives who attended meetings on a monthly basis:

TABLE 51

	Meetings		Workshops		Conferences	
Month	f(x)	%	f(x)	%	f(x)	%
July						
August						
September	17	53				
October	15	47				
November	18	56				
December	10	30				
January	11	34	19	59		
February	12	38	14	44		
March	14	44	15	47		
April	11	34	20	62		
May	12	38			32	100
June	14	44				

In addition, the average number of meetings attended by any PAC member was 16 or 40%.

TABLE 52

and percentage of person who attended meetings

# Of Meetings	f(x)	Cum f(x)	%	Cum %
1-5	7	7	21	21
6-10	5	12	16	37
11-15	5	17	16	53
16-20	3	20	9	62
21-25	7	27	21	83
26-30	2	29	6	89
31-35	0	29	0	89
Over 36	3	32	10	100
	32		100	

Objective 3 was examined by the use of a 15 item interview questionnaire.

The following table represents the percentage of correct responses to each of the items.

TABLE 53

Questions	%age of Correct responses
1. What is Title I?	100
2. How do Title I funds come to District 7?	73
3. Who is eligible for Title I services?	91
4. What kinds of programs can be funded by Title I monies?	100
5. How are programs planned in District 7?	91
6. Who implements Title I Programs?	82
7. Who evaluates Title I Prograsm?	64
8. What are specific Title I costs for each child per program?	91
9. How are students selected as Title I participants?	82
10. What grade levels are given priority?	100
11. What instructional areas are given priority?	91
12. Do you know the formulas for determining Title I school eligibility?	55
13. Approximately how many students are served by Title I Program in District 7?	64
14. How many Title I programs are implemented in the District?	91
15. How much money has been allocated for Title I Programs for 1976-77 ?	91

The average percent of knowledgeability about the various aspects of the Title I Programs is 84%. Since the average response indicates knowledge of over 75% of the items, the objective has been met successfully.

Objective 4 was measured by use of a scaled type questionnaire. The first seven items were open-ended, while the remaining 30 items used a 5 point rating scale.

An analysis of the first seven items indicates that:

1. there was a school based PAC at each school.
2. the representative of the school based PAC included a predominance of parents, followed by paraprofessionals, a few teachers and the district PAC.
3. the number of members on the school based PAC were at least seven and in a few cases up to 13.
4. 78% of the respondents said that their school based PAC met once a month, while the remaining 22% met twice per month.
5. 30% of the respondents said that the school based PAC met in the parent's room, another 30% met in the school's conference room, while the remaining 40% met in the principal's office.
6. 100% of the respondents attended the District PAC meetings regularly.
7. 100% of the respondents attended at least one of the District PAC workshops.

The remaining 30 scaled items were rated as follows:

1= strongly disagree
2= disagree
3= not sure
4= agree
5= strongly agree

TABLE 54

Questions	Rating
1. I know exactly what the objectives of Title I are about...	3.7
2. The PAC is assisting in making the Title I objectives known to others.....	3.9
3. There is adequate representation at the PAC meetings.....	4.2
4. District leadership is responsible for making known the Title I objectives.....	4.2
5. District PAC has had an active role in the planning of the Title I programs for 1976-77.....	4.2

Questions	Rating
6. District PAC has had an active role in the implementing of current Title I programs	4.0
7. School based PAC acts as an effective liaison between the District staff and the school	3.8
8. School based PAC acts as an effective link between the District PAC and the school	4.1
9. School based PAC acts as an effective link between the school and the Parents Association	3.7
10. The regular monthly Thursday meetings are a waste of time	1.4
11. The Thursday workshops are very important	4.5
12. The Thursday workshops are well prepared and presented	4.2
13. The Thursday workshops are very informative	4.1
14. The Thursday workshops are a waste of time	2.0
15. I know all about the Title I Programs implemented in this District	3.2
16. The Thursday meetings are attended by at least 75% of all of the PAC members	3.4
17. At least 2/3 of the Thursday meetings have been attended by 75% of the PAC members	3.5
18. The PAC has acted effectively in the role of an advisory council to the District School Board	4.0
19. The District PAC has had an active role in the evaluation of the Title I Programs	3.4
20. The District PAC is consulted on all matters regarding Title I Programs	3.5
21. The District PAC has made many valuable recommendations to the school board	4.5
22. The School Board pays attention to what the PAC recommends	3.6
23. The District PAC always reads and reviews proposals	4.1
24. The Title I Program Coordinators have been helpful in discussing the objectives and implementation of their various Title I Programs	4.2
25. The school based PAC always submits minutes of the individual school PAC to the District PAC	2.6
26. Members of the PAC were appropriately selected and attended Title I conference that were held in city, state and federal regions	3.9
27. The one day Parent conference in May was the best educational/informational conference held yet	4.1
28. The District Title I Programs have been well implemented and have successfully met its objectives	3.8
29. The school based PAC needs greater parental involvement	4.7
30. The By-laws for the Funded Programs Advisory Council are always followed	3.7

The criteria for success was that 75% of the rating scores would be above 3.5; this objective was met successfully.

Based upon the analysis of data, it is evident that the parental involvement component has been successful in achieving its stated objectives.

4. Recommendations

a. It is recommended that the process of forming the school PAC be conducted in early September 1978.

b. It is recommended that workshops in Title I be held as early in the school year as possible so that the PAC members will receive the most value from what they learn and have greater time in which to implement it.

c. It is recommended that more advanced workshop series be prepared for members who have served on the PAC previously.

d. It is recommended that the Visitation Committee in charge of organizing visits to programs be organized promptly and its activities set into motion early in the school year.

e. It is recommended that the School PAC-District PAC liaison role of the District PAC members be emphasized and formalized with schedules, reports, etc.

5. Conclusions

The PAC activities, the school PAC meetings, the 40 meetings of the District PAC, the 8 workshops, and the Title I Parents Conference increased parental involvement in District 7 far beyond the previous years. The increase participation of parents in the school PAC, the attendance at the District PAC meetings and the total involvement of the PAC members, both district and school, in the conference was indicative of the interest developed in parents. Parental involvement was also visible in the increased attendance at Community School Board meetings and hearings, especially those concerning Title I affairs. The attendance and participation of parents, especially PAC members, were all indicative of the increased awareness of parents to the importance of their participation in their childrens' school experience.

PART II

K. Augmentation of Strengthening Early Childhood (B/E 5045-88752)

1. Description of the Proposed Program

This program was to provide pupils in grades K-2 English Reading and Language Arts that is supplemental to the tax-levy development program.

Each reading paraprofessional (in English) was to work with small groups of children, 4-5 per group, 5 times a week for 30-40 minute periods (depending upon the attention span of children and the activity used) in the classroom.

The educational assistants were to engage in an "experimental activity-oriented learning program" in reading and language activities using hands-on materials cognitive games, experience charts, language experience techniques, A.V. materials, games prepared at paraprofessional workshops, trade books, and kits.

The Language Arts skills to be stressed at the kindergarten level were to include oral language, auditory perception, visual perception and motor-perceptual; while at Grades 1 and 2, the skills were to include oral language development for comprehension and concept, word attack skills, comprehension and word study.

Implementation of the program was to require two Resource Teacher, and four Educational Assistants.

The overall supervision of the program was to be provided by the District Supervisor of Early Childhood.

The paraprofessional staff was to receive 36 hours of in-service training during the school year. These in-service training sessions were to be jointly conducted by the Early Childhood Resource Teachers as well as the two Coordinators and the District Supervisor of Early Childhood.

2. Description of the Observed Program

The consultant visited the two participating schools, which concentrated their efforts in the area of English reading and language arts skills.

The program functioned in an identical fashion (see pages 6 & 7 of this report) using the services of 4 educational assistants.

Approximately 85 students in grades K-2 participated in the program.

3. Program Objectives and Data Analysis

Reading Component

(a) The children in kindergarten made a significant gain (p=.05) in pre-reading skills as measured by the Boehm Test of Basic Concepts. The participating population included 50 children in English reading. All participatants were pre-tested in October 1977 and post-tested in May, 1978. Data was analyzed according

TABLE 55

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Boehm Test of Basic Concepts
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
K	50	32.8	9.3	42.3	17.1	21	36	3.60

TABLE 56

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Clymer Barrett Pre-Reading Battery Raw Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
1	19	48	24	86	20	9.28

Strengthening Early Childhood
Reading Component
Impact Aid

TABLE 57

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the S. E. C. Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
2	16	13.5	12.5	20.3	16.1	4	8	3.05

to the procedures described using the norm referenced Model A-1 (real post vs. anticipated gain design using normal curve equivalent scores). (see Table 55).

(b) English monolingual children in Grade 1 made a significant gain (p=.05) in total reading as measured by the Clymer Barrett Pre Reading Battery.

The participating population included 19 children. All students were pre-tested in October 1977 and post-tested in May 1978. A t-test for correlated means was used to measure the significance of the difference (see Table 56).

(c) English monolingual children in grade 2 made reading beyond expectation (p=.05) as measured by the Stanford Achievement Test.

The participating population included 16 children in grade 2. All participants were pre-tested in October 1977 and post-tested in May 1978. Data was analyzed according to the procedures described using the norm referenced model A-1 (real post vs. anticipated gain design using normal curve equivalent scores). (see Table 57).

4. Recommendations

See page 18 of the Strengthening Early Childhood Report.

5. Conclusions

See page 19 of the Strengthening Early Childhood Report.

L. Augmentation of Developmental Learning Program (B/E 5045-88753)

1. Description of the Proposed Program

The Developmental Learning Program was designed for children of average potential who have difficulty in processing information through visual and auditory channels and/or lack gross or fine motor control. Thus, the goal of the program was to significantly improve the reading and mathematics skills of these learning disabled children.

The proposal called for a Developmental Learning Teacher and a Developmental Learning Paraprofessional for each site, and a Program Coordinator.

The proposal mandated that 90 children in grades 1-4 be served by the program. The plan stated that children should be selected through diagnostic testing. The mandated sequence of tests included an initial screening test, the Prior Evaluation Instrument for Perceptual Development and tests of Evaluation Instrument for Perceptual Development and tests of academic achievement. Once testing had been completed, the proposal stated that high or low functioning, homogeneous groups of students be formed on the basis of their functional problems--visual, auditory, mixed and/or multi-sensory. Each of these groups were not to exceed four students and these four students were to be instructed for 45 minutes, three times a week. After each session student progress was to be evaluated for the purpose of modifying the curriculum or instruction.

Essentially, the Developmental Learning Program was planned to be a highly individualized diagnostic/prescriptive reading and mathematics program employing instructional techniques aimed at helping children with developmental learning problems.

2. Description of the Observed Program

Two Developmental Learning Program sites were visited to observe the implemented program.

The remaining section of the report can be found on pages 20 through 24.

3. Program Objectives and Data Analysis

All participants were pre-tested in October, 1977 and were post-tested in May, 1978. Data was analyzed according to USOE evaluation Model A-1, and reported separately by grade level.

Reading

a. In reading letters and sounds the first grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the Stanford Early School Achievement Test (SESAT), Part 3-Letters and Sounds (See Table 58).

TABLE 58

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Devel. Learning Program by Grade Level

(Name of Test: Stanford Early School Achievement Test
Letters & Sounds Sub-test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
1	43	61.7	17.8	73.1	16.1	71	86	3.85

TABLE 59

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. Learning Program by Grade Level

(Name of Test: Stanford Early School Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Letters & Sounds	2	21	50.6	12.6	71.5	11.9	50	85	6.60
Word Reading	2	21	71.9	12.8	73.6	14.6	85	87	0.53

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TABLE 60

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop. Learning Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Reading	3	16	54.8	9.8	60.2	24.3	59	69	0.89
Word Study Skills	3	16	55.7	19.2	64.8	21.1	61	76	1.71

Developmental Learning Program
Math Component
Impact Aid

TABLE 61

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Devel. Learning Program by Grade Level

(Name of Test: Stanford Early School Achievement Test
Math Sub-test
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
1	43	41.6	17.5	63.8	24.3	34	74	4.73
2	21	53.8	23.6	78.1	18.3	57	91	3.78

TABLE 62

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Develop Learning Program by Grade Level

(Name of Test: Stanford Achievement Test
Normal Curve Equivalent Scores)

Test	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Math Concepts	3	16	38.5	10.1	55.7	19.7	29	53	3.26
Math Computations & Applications	3	16	57.9	19.1	50.9	18.4	65	52	-1.17

b. In reading letters and sounds and reading words, the second grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SESAT - Part 3 - Letters and Sounds Part 5 - Word Reading (See Table 59).

c. In reading and word study skills, grade 3 participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the Stanford Achievement Test (SAT) (Primary Level I) Reading- Part A, Word Study Skills. (See Table 60).

Mathematics

a. In total mathematics participating first grade children with few skills demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by SESAT Math sub-test. (See Table 61).

b. In total mathematics second grade participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SESAT - Math subtest. (See Table 61).

c. In math concepts, computation and applications, third participants demonstrated achievement beyond expectation (p=.05) in normal curve equivalent units as measured by the SAT (Math Concepts, Math Computation, and Applications Subtests). (See Table 62).

4. Recommendations

See recommendations on pages 32 and 33 of the Developmental Learning Program report.

5. Conclusions

See conclusions on page 33 of the Developmental Learning Program Report.

M. Augmentation of Creative Arts Alternative Program (B/E 5045-88754)

1. Description of the Proposed Program

This aspect of the program was to provide for the extension of the project to two schools, an elementary (P.S.1) and an intermediate school (I.S. 183). A teacher assisted by an educational assistant was to provide instruction to 45 students six groups of children four times a week. Each group was not to exceed 15 children. The basic materials used would be "Teaching Reading Skills Through Drama" published by New Dimensions. These materials are readers, developed in play form, cued into various reading levels which ranged from about grade 2 through grade 6.

2. Description of the Observed Program

The program was implemented in April, 1978 at the elementary school. The intermediate school was unable to find a teacher with all of the necessary qualifications.

A large, light classroom containing moveable desks and chairs was the setting in which the Teaching Reading Skills Through Drama took place. The furniture was rearranged frequently for the reading of plays or seminar-type discussions.

Part of the room was left empty to be used as a stage. Here, scenery was constructed by the children which was useful for a number of different plays. An outdoor backdrop, an indoor backdrop, and tall, free-standing trees suggested an atmosphere of fantasy.

The teacher was hired in April 1978. She had considerable experience in teaching and curriculum development, particularly in using the arts for teaching basic skills. She had also been a writer of educational filmstrips for children. The paraprofessional was hired in June, 1978. She had several years of experience as a pararofessional and volunteer classrom aid and extremely skilled in crafting materials such as costumes. The teacher and paraprofessional team were well suited for the program.

Ninety children, from grades 3 and 4 were originally assigned to the program. These proved, initially, to be too many children for an effective program under one staff member and the children who remained numbered about 45.

The participating children came in groups of 10. Each child participated in the program four times each week.

The children of a bilingual third graders and combination 3-4th graders were seen in smaller groups. Each child participated in the program about twice each week in order to include as many as possible.

There was no orientation and training. The teacher developed methods and materials by experimentation.

Supervision by the Assistant Principal was in the form of support and encouragement for whatever the teacher thought would be useful. In addition, the Program Coordinator of the Creative Arts Alternative Program did make himself available to assist when necessary.

A variety of materials was used, as follows:

a. Children of one Grade 4 class, read, rehearsed and produced for an audience the first of the plays originally planned for the program, Annancy and Chim Chim

b. One small group of students in a combined grade 3 & 4 class read and briefly dramatized two other plays originally planned for the program: Annancy and Tiger and Six Hard Boiled Eggs.

c. Very short folk plays were adapted by the teacher for use by the other children in the program.

d. Nursery rhymes and poetry were orchestrated into choral readings.

e. Three children who did not read at all, and for whom group activity was not productive, were instructed on an individual basis to develop pre-primary reading skills.

To make the written language come alive, the following techniques were used:

a. the teacher dramatically told the story before the children began reading;

b. the plays were read through with parts rotating; emphasis at this stage was on accurate reading and punctuation as a reading guide. (e.g. "That's an exclamation point. Read it again and let me hear the exclamation point".)

c. tryouts for parts followed, with the group participating in selections;

d. rehearsals included:
   1. copying parts
   2. making signs with pictures of the characters
   3. designing and constructing sets and props
   4. consulting on costumes
   5. expressive portrayal of characters.

e. pantomime (physical expression of the words) were rehearsed separately; gesture was combined with reading only after both reading and gesture were securely mastered;

f. listening was emphasized as an essential skill, manifested in at least two ways:

1. listening for one's cue
2. listening led to the children's correcting each other's expressive reading. They frequently helped each other with interpretation.
The teacher encouraged this and often found it unnecessary to demonstrate a passage because another child had learned to do it effectively.

Coordination with the tax-levy classroom teachers took place when classroom teachers used the activity books included in the program to some extent.

3. Program Objectives and Data Analysis

In reading, the participants demonstrated mastery of the objectives listed in the SED classification index. The Fountain-Valley Reading Test data has been reported in criterion referenced format. (See Tables 63 and 64).

Grades 3 and 4:

Word Meaning - 2305
Main Ideas - 2406
Drawing conclusions-2408

All students were pretested in April, 1978 and post-tested in June 1978. The participating population included 39 students in grade 3 and 32 students in grade 4. Data for each grade level has been analyzed and reported separately.

While students did show mastery of various reading skills, it was difficult to determine significant growth, since the students received treatment for approximately two months.

4. Recommendations

a. It is recommended that the teacher's guide include: pantomime activities, staging techniques, games that use movement and language

b. It is also recommended that the teacher of this program have regular interchange with a reading teacher to focus on specific skills, as well as meetings with others teaching reading through drama in other schools. Shared experiences and insights could refine the techniques and direction more quickly.

TABLE 63

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Teaching Reading Thru Drama Program

Name of Test: Fountain Valley Reading Test
Red Level, Parts 4 and 5

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2305	Word Meaning	17	22	20	19
2406	Main Ideas	3	36	4	35
2408	Draw Conclusions	8	31	21	18

1. Number of Students is 39.

2. Grade 3 Students.

TABLE 64.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Teaching Reading Thru Drama Program

Name of Test: Fountain Valley Reading Test
Red Level, Parts 4 and 5

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2305	Word Meaning	25	7	29	3
2406	Main Ideas	10	22	12	20
2408	Drawing Conclusions	23	9	28	4

1. Number of Students is 32.

2. Grade 4 Students.

5. Conclusions

Teaching Reading Skills Through Drama is a very effective teaching device for many children, assuming that the teacher who directs it is sensitive, flexible, imaginative and skilled in language as well as developmental problems.

It is most effective with children who have some decoding skills and who need help in developing comprehension skills.

The program is not the most effective teaching support for

a. children who can't read at all
b. children who have great difficulty functioning in groups

The most important effects observed by the classroom teachers were:

- a sharp change in expressive reading in the classroom, reflecting better understanding of the written word;
- improvement in listening skills;
- enthusiasm for the drama programs was carried over into attitudes toward work in the classroom when they returned;
- funded program teacher discussed particular skills or handicaps of the program children with classroom teachers, and efforts were made for mutually supportive activities.

This is a program that should be re-funded for the coming year and implemented at the beginning of the school year in order to determine its effectiveness.

1. Description of the Proposal Program

A bilingual language lab was to be established in one elementary and junior high school to provide supplementary language instruction for those students who have limited ability in English. The lab was to be equipped with a wide variety of multi-media materials which were to be used to provide small group and individual instruction to the participating students in the ares of English as a Second Language, Spanish Language Arts and English Reading Skills.

In the ESL component, students were to be selected to participate in ESL lab activities based on the results of the English version of the LAB (Language Assessment Battery) administered in April 1977. Those students who fell below the 20th percentile were to be chosen for the ESL component of the lab. The following instructional sequence was to be followed in ESL lab activities: Listening and Speaking, Reading, Writing and Independent Study.

In the Reading component (English and Spanish) the following methodology was to be used. Children were to participate in one or the other, not both. Those students who scored above the 10th but below the 20th percentile of the English version of the LAB test were to be selected to participate in the English Reading component. Those students who scored above the 20th but below the 50th percentile of the Spanish version of the LAB test were to be selected to participate in the Spanish reading component.

A great variety of audio-lingual tapes and materials were to be utilized to provide instruction in the fundamental reading skills. A multi-media approach was to be used to motivate older students to master fundamental reading skills. Students were to be tested to diagnose specific strengths and weaknesses. An individualized high-interest reading program (Clues to Reading) was to be used to remediate these skills deficiencies.

Seventy-five students from each school were to be selected to participate in the program. They were to be grouped on the basis of their ability in English and Spanish in groups of no more than 15 at a time.

ESL and English Reading groups were to receive three forty-minute periods of lab instruction a week for a total of 120 minutes a week. The Spanish Reading group was to be programmed for one or two 40-minute periods a week, depending on scheduling arrangments and/or students' needs.

2. Description of the Observed Program

The Bilingual Language Lab Program was implemented in February 1978, at only the elementary school. (see report funded under Title I, Page 91 for full presentation of the program.

3. Program Objectives and Data Analysis

a. Children participating in the ESL component achieved beyond expectation ($p=.05$) in language arts skills measured in normal curve equivalents using the Language Assessment Battery. All participants were pre-tested in Februay 1978, and post-tested in June 1978. Data for each level will be analyzed and reported separately. (see Table 65).

Bilingual Language Lab
ESL Component
Impact Aid

TABLE 65

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Bilng. Lang Lab. Program by Grade Level

(Name of Test: Language Assessment Battery
Normal Curve Equivalent Scores)

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
3	21	10.0	7.2	20.1	8.4	3	8	7.35
4	11	17.4	7.4	23.9	8.4	6	11	5.14
5	8	9.3	6.3	15.7	9.8	3	5	4.09

TABLE 66

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Bilingual Lang Lab Program by Grade Level

(Name of Test: Language Battery Assessment Raw Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
Listening	3	21	14.5	5.0	18.1	5.5	4.88
	4	11	19.4	5.0	20.9	4.2	1.52
	5	8	19.0	6.8	22.9	7.1	4.24
Reading	3	21	5.4	3.4	6.7	2.9	3.10
	4	11	10.2	2.8	11.8	3.5	2.21
	5	8	11.0	4.4	12.0	5.2	1.08
Writing	3	21	4.6	3.0	7.2	3.5	8.60
	4	11	8.9	4.7	12.4	5.6	5.69
	5	8	9.2	5.0	11.1	5.6	4.71
Speaking	3	21	6.2	3.6	9.0	3.3	5.19
	4	11	9.3	2.4	10.5	2.9	1.55
	5	8	10.5	2.9	12.0	1.8	3.24

TABLE 67 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants	3	9	5	7
2106	Vowels: Single Letters	4	8	7	5
2305	Word Meaning	2	10	2	10
2404	Facts & Details	3	9	4	8

1. Number of Students is 12.
2. Grade 3 Students.

TABLE 68 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants	3	5	5	3
2106	Vowels: Single Letters	2	6	4	2
2305	Word Meaning	1	7	5	3
2404	Facts & Details	2	6	2	6

1. Number of Students is 8.
2. Grade 4 Students.

TABLE 69

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Language Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2104	Final Consonants	2	8	4	6
2106	Vowels: Single Letters	3	7	5	5
2305	Word Meaning	2	8	3	7
2404	Facts & Details	4	6	4	6

1. Number of Students is 10.
2. Grade 5 Students.

b. Children participating in the ESL component (for 4 months) made a significant gain (p=.05) in listening, speaking, reading and writing as measured by the respective sub-tests of the Language Assessment Battery (See Table 66). All participants were pre-tested in February 1978 and post-tested in June 1978. A t-test for correlated means was to be used to measure the significance of the differences.

Since appropriate normative data is not available, raw scores were used. Data for each grade level were analyzed and reported separately.

c. Some children participating in the English reading component demonstrated mastery of the objectives listed in the SED classification index. Stanford Diagnostic Reading Test data has been reported in criterion referenced format (See Tables 67-69).Grades 3, 4, & 5: Phonetic Analysis: 2104, 2106, Vocabulary: 2305, Comprehension: 2404.

All participants were pre-tested in February 1978 and post-tested in June 1978.

4. Recommendations

See page 103 of the Bilingual Language Lab report.

5. Conclusions

See page 103 of the Bilingual Language Lab report.

O. 1. Augmentation of Math Resource Centers for P.S. 1 and P.S. 154 -- (B/E 5045-88756)

1. Description of the Proposed Program

The Mathematics Resource Center was to be established in the two schools and was to contain various math kits, manipulative materials, texts and A.V. supplies. The seventy-two participating children in each school were to be diagnosed to determine their strengths and weaknesses in mathematical skills. According to their diagnosed needs, students were to be programmed in small groups or on an individual basis. There were to be a minimum of twelve (12) students in each group, meeting a minimum of three times a week for 45 minutes.

The Math Resource Center Teachers were to prescribe corrective mathematics instructional activities according to the needs of each child. He/She were to be assisted in all instructional activites by an educational assistant.

Educational Development Corporation Criterion-Reference Testing was to be used for diagnosis. Teachers were to receive computer print-outs for each child and classgroup. These print-outs were to be used to maintain the on-going records of each child. Each child was to also keep an independent folder where he/she would be able to keep his/her own records. Students were to have the opportunity to do independent work and to develop the process skills in obtaining mathematical information, doing calculations, checking work and making corrections.

2. Description of the Observed Program

The consultant visited the two participating schools which concentrated their efforts in a diagnostic/prescriptive approach to math remediation in a small group or individual basis, in a math lab setting.

For a full description of the programs functioning, see pages 70 to 72.

3. Program Objectives and Data Analysis

In mathematics computations, concepts, problem solving and total scores, the participants demonstrated achievement beyond expectation ($p=.05$) as measured by the appropriate level of Stanford Diagnostic Math Test. (See Table 70).

TABLE 70

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Math Res Centers Program by Grade Level

(Name of Test: Stanford Diagnostic Math Test
Normal Curve Equivalent Scores)

Sub-tests	Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	Percentile Rank Pre	Percentile Rank Post	t-test
Numbers & Numeration	3	83	16.7	11.9	40.9	13.8	6	33	14.89
	4	24	26.0	9.6	47.0	12.1	13	44	10.66
	5	17	31.1	9.4	51.8	14.7	18	53	7.83
	6	12	35.2	7.4	53.8	11.9	24	57	5.59
Computations	3	83	23.6	15.1	42.2	17.8	10	36	8.71
	4	24	31.9	7.6	46.7	14.4	20	44	5.00
	5	17	33.3	11.7	56.9	13.7	21	63	4.49
	6	12	20.2	7.0	56.0	19.6	8	61	7.73
Applications	3	83	15.5	10.5	41.1	13.7	5	34	14.54
	4	24	22.2	7.9	40.0	16.6	9	32	5.55
	5	17	25.1	13.2	49.3	17.2	12	49	9.01
	6	12	15.2	11.5	47.5	21.6	5	45	3.86
Total Math	3	83	16.4	11.1	39.7	13.0	5	31	15.88
	4	24	25.3	6.5	45.6	11.1	12	42	12.52
	5	17	28.4	7.5	52.5	13.1	15	55	7.58
	6	12	21.1	3.4	52.0	15.3	9	54	7.30

A total of 144 children in grades 3-6 participated. All students were pre-tested in October, 1977 with the Stanford Diagnostic Math Test, Form A. Post-testing took place the second of May, 1978. The USOE Model A-1 was used to analyze the data and has been reported separately by grade level.

4. Recommendations

See pages 74 and 82 of the Math Resource Centers report.

5. Conclusions

See page 82 of the Math Resource Centers report.

O.2. Augmentation of Math Concepts Resource Center (B/E 5045-88756)

1. Description of the Proposed Program

The Math Concepts Resource Center (MCRC) was to create an atmosphere where students can witness and experience relevant situations which express the need for an understanding of mathematical concepts. The MCRC was to develop and enrichment program to assist those students below their appropriate math levels.

The MCRC was to supplement and enhance the regular math curriculum through small group instruction by providing for individual differences.

Students were to be selected on the basis of their M.A.T. Math scores. Individuals scoring two years or more below grade level were to be candidates for the MCRC. The target population was to be chosen for the 6th-8th grades.

The center was to concentrate on math concepts. Experiences in practical applications of concepts were to be provided. Activities were to be organized in three phases:

1) skill acquisition
2) skill application
3) independent activity (project applying skill).

Students were to participate two periods weekly (total of 90 minutes). The activities were to include development and management of a small business, creation of insurance portfolios, tabulation of monetary data, calculations of sales tax, preparation of income tax returns, etc.

The program was to utilize the services of one teacher and two educational assistants.

2. Description of the Observed Program

The Math Concepts Resource Center was located in a large, airy double classroom with a movable partition. One room was set up as a lecture room; the other was arranged in learning stations with groupings of movable furniture. There was also an area with a rug and lounge furniture. Stations were clearly labeled and keyed to assignments in the teacher's plan book. Children's work, photos, and a display explaning the program were attractively hung in the room. The lab room was used only for the program; the lecture room was shared. Centers included one for desk and hand calculators, one for special projects, areas for work with math kits, filmstrips., audio-cassettes, texts and workbooks, puzzles and project books. Lab materials were organized according to whole numbers, fractions, decimals and percentage, geometry, and measurement.

The staff for the Mathematics Concepts Resource Center consisted of one teacher and two paraprofessionals. The teacher and paraprofessionals worked with children in groups of 1 to 4 at a station. Staff schedules were posted and all worked from a common plan book which contained the prescriptions for the children. Prescriptions were written by the teacher.

The ambience in the room was excellent. The children were actively involved in their assignments. The teacher and paraprofessionals rotated among the groups, questioning, teaching and correcting work.

Seventy-five children were serviced for three forty-minute periods a week beginning in March, 1978. The children were selected on the basis of MAT scores.

The teacher developed modular tests to pre-test and post-test the children at each stage of instruction. Individual pupil progress was indicated on the progress card for each pupil and could also be determined through pupil workfolders. Pupil participation lists were available, indicating the children who come from each class for each period.

The teacher designed the program and trained the paraprofessionals on the job. One paraprofessional began employment in March; the other commenced work in May. Preparation periods were used to demonstrate new techniques and initiate new aspects of a module. The paraprofessionals were trained to work with specific prescriptions within each module. Both the teacher and paraprofessionals were unable to attend the initial training sessions or the weekly workshops due to conflict in program schedules. (The teachers had three classes during the scheduled monthly workshops). The program coordinator and building principal trained the staff on the job.

The program was supervised by the building principal, while coordinated by the District Math Resource Center Coordinator (for junior high schools). Informal supervisory visits were made on a regular basis by both the program coordinator and the building principal. The teacher directly supervised the two paraprofessionals in the program.

A wide variety of manipulative, print and audiovisual manipulative, was available. Most of the materials were obtained through tax-levy funds or were available from previously existing funded programs.

Desk calculators, handcalculators and Dataman were widely used as were several math kits such as Developmental Math Cards, SRA Kits, Computapes, Mathimagination worksheets, materials from Creative Publications, Cuisenaire Company of America, Midwest Publications and SEE. These included worksheets, guidebooks, taskcards, and manipulative materials (multibase, cubes, Cuisenaire Rods, Mirror Cards, Pattern Blocks, Chip Trading). There was also a range of measurement and geometry manipulatives.

Materials were organized in stations around topics such as place value, measurement, geometry, fractions. Labels were coded to prescriptions and to modular tests and quizzes.

Instructional activities were divided into three phases 1) acquisition of Basic Skills, 2) developing concepts using skills; and, 3) applications. The majority of the children who received instruction in the laboratory were in the first phase of the program.

Most of the children worked on tasks related to computation with whole numbers and computation with fractions. Most of the children practiced basic skills through work with Developmental Math Cards, Calculators, Dataman, Mathimagination drill sheets, and Computapes. Several children received direct instruction from the teacher and paraprofessional in new concepts. These were reinforced through games and activities using manipulative materials and several math lab tasks.

Children took a general diagnostic test designed by the teacher. On the basis of the results, children were assigned modules. The teacher and paraprofessionals measured the child's achievement throughout the module through quizzes, checking work, and conversations with and observation of the child at work. Several children also worked on projects during free periods. The projects provided additional opportunity for the children to practice skills and work with new concepts.

The funded teacher and paraprofessionals informally discussed student progress in the Mathematics Concept Resource Laboratory with the tax-levy classroom teachers. This was an important aspect of the program since it was designed from needs determined by teachers in the regular tax-levy program.

3. Objectives and Data Analysis

The participants demonstrated mastery of the objectives listed in the SED classification index. The Everyday Skills Test (Math, Test A - CTB McGraw Hill) data has been reported in criterion referenced format. (See Tables 71-72).

Grades 6,7,8: Percent - 1116
Monetary Systems - 1305
Time and Date - 1306
Solutions - 1902

TABLE 71.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math Concepts Resource Center Program

Name of Test: Everyday Skills Test (Math, Test A)

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1116	Percent	0	5	0	5
1305	Monetary System	5	0	5	0
1306	Time & Date	2	3	2	3
1902	Solutions	0	5	1	4

1. Number of Students is 5.

2. Grade 7 Students.

TABLE 72.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Math Concepts Resource Center Program

Name of Test: Everyday Skills Test (Math, Test A)

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
1116	Percent	3	30	3	30
1305	Monetary System	27	6	30	3
1306	Time & Date	21	12	21	12
1902	Solutions	11	22	17	16

1. Number of Students is 33.

2. Grade 8 Students.

All students were pre-tested in April, 1978 and post-tested in June 1978. A total of 75 students in grades 6-8 participated. The Everyday Skills Test data have been reported in criterion referenced format. Data for each grade level has been analyzed and reported separately.

4. Recommendations

a. It is recommended that the program begin earlier in the school semester.

b. It is recommended that the teacher's schedule allow for flexibility in attending training sessions and workshops.

c. It is recommended that selection of students for the Mathematics Concept Resource Center be coordinated with selection of students for other Title I programs (the Mathematics Resource Center).

e. It is recommended that there be more articulation with tax-levy programs and the minimum competency program.

f. It is recommended that a repair budget be included so that hardware can be serviced as required.

g. It is recommended that discretionary funds be made available to the teacher so that materials which were not available at the time of the proposal can be secured.

5. Conclusions

The first two phases of the program have been implemented according to design. The late start of the program (March) did not permit the implementation of most of the applications.

The students seemed to be aware of the need for mathematics in specific careers and consumer roles. The students seemed to be progressing in basic skills as measured by quizzes and recorded on progress records. This is particularly evident in the topics of whole number computations and fractions. The students seemed able to use the calculator and manipulative materials to solve problems. The students seemed to have a positive attitude toward the learning of mathematics as indicated in their involvement in their work.

The program served a very important need in furnishing students with a practical application of math concepts and should be re-funded for the coming year.

P. Bilingual Diagnostic - Prescriptive Learning Program at P.S.29 (B/E 5045-88757)

1. Description of the Proposed Program

The instructional methodologies were to be geared toward establishing a developmental language/reading program evolving into a diagnostic/prescriptive approach to the teaching of reading in English and/or in Spanish.

As a terminal objective, students were to participate in a dual-impact reading program receiving both the developmental language program and having their diagnosed reading skill deficiencies remediated. The methodology utilized to ameliorate reading deficiencies was to vary with the needs of the individual child. The lab was to be equipped with a wide variety of materials and testing instruments: Prueba de Lectura, EDL-McGraw Hill Informal Reading Inventory and Placement Test, Fountain Valley Reading Inventory Evaluation. With these tools, the lab teacher was to select the type of methods, materials, etc., to be used with each child.

Structurally, the lab was to work with small cluster groups and individuals. As the lab became more refined in its offering, ad hoc groups were to be formed based on diagnosed needs. Each participating student would have the following on-going records for English and Spanish: Prueba de Lectura, McGraw Hill Placement Test, Fountain Valley reading record card, Diagnostic Test Folder, Lab Work Folder, Computerized contract and work folder, Attendance Record.

All the youngsters in the bilingual classes, Grades 2 through 5 were to be administered the following tests: Prueba de Lectura, Stanford Diagnostic Reading Test & the McGraw Hill Placement Test. These tests would serve three functions; (1) as a measure of the participating student's language ability; (2) as a pre-test; (3) and as a placement test. These children were then to be scheduled for lab instruction five (5) times a week (45 minutes each session). There was to be 25 instructional periods per week providing a total of 1,125 minutes of instruction per week. The participating children were to be accompanied by the classroom teacher who would be involved in all lab activities, along with the BRL teacher, the BRL para and the para who was scheduled to work with that class. Each class would consist of 32 students rendering the participant/staff ratio for instructional sessions at 32:4.

The BRL teacher would provide instruction as indicated above; supervise and help train educational assistants, function as in-house teacher-trainer for each of the five participating classroom teachers; establish a systems approach reading program for children, which also provides a management training experience for teachers; develop resource file on materials, tests, inventories and student data; participate when feasible, in school reading committees.

The educational assistant would assist in all aspects of the reading lab and related components under the direction of the bilingual reading lab teacher. Duties would include: working with small clusters of children, operating reading machines, retrieving and storing all materials used in the lab, assisting in correcting children's work

and assisting with the instruction of specified reading lessons.

Supervisory personnel for this program were the school administrator and the district coordinator of the Diagnostic-Prescriptive Learning Program.

Staff training was one of the major objectives in the program. The School administrator was to schedule five (5) in-lab training sessions in BRL teaching techniques during the month of December. During the month of January, the school administrator and the District's DPLP coordinator were to conduct three (3) in-classroom workshops on how to implement BRL teaching techniques. With the on-going assistance of the administration and DPLP coordinator, the four participating teachers were to be expected by March 31st to have implemented the BRL techniques in their own rooms. The classroom teacher would have the following in the room: (1) prescriptive contracts individualized work plans based upon previous diagnosis, (2) developmental language group. (3) grouping according to assessed needs, (4) independent reading activities.

The District Coordinator of the Diagnostic-Prescriptive Learning Lab Program was to provide training to both BRL teacher and para on the general lab operation, diagnostic/prescriptive operations, classroom extension program,

2. Description of the Observed Program

The program was implemented according to the proposal. One teacher and one educational assistant were hired to work in the Bilingual Diagnostic/Prescriptive Learning Program.

A total of 118 students in grades 2-5 received the services provided by this program.

The program provided reading remediation in English, English as a Second Language and Spanish reading as an enrichment activity in a lab setting. The classroom teacher brought his/her students to the lab and in conjunction with the Bilingual Diagnostic/Prescriptive Learning Lab Teacher and paraprofessional worked with individual or groups of students.

TABLE 73 .

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Diag/Pres Learning Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2102	Initial Consonants	30	22	36	9
2104	Final Consonants	9	43	24	28
2305	Word Meaning	5	47	10	42

1. Number of Students is 52.
2. Grade 2 Students.

TABLE 74.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Diag/Pres Learning Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2102	Initial Consonants	26	8	32	2
2104	Final Consonants	15	19	27	7
2305	Word Meaning	16	18	19	15
2404	Facts & Details	19	15	20	14

1. Number of Students is 34.
2. Grade 3 Students.

TABLE 75.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Diag/Pres Learning Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2102	Initial Consonants	10	10	16	4
2104	Final Consonants	6	14	12	8
2106	Vowels: Single Letter	5	15	5	15
2305	Word Meaning	5	15	10	10
2404	Facts & Details	6	14	8	12

1. Number of Students is 20.
2. Grade 4 Students.

TABLE 76

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Diag/Pres Learning Lab Program

Name of Test: Stanford Diagnostic Reading Test
Red Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2102	Initial Consonants	4	8	12	0
2104	Final Consonants	6	6	6	6
2106	Vowels: Single Letter	4	8	4	8
2107	Vowels: More than one letter	9	3	9	3
2305	Word Meaning	0	12	5	7
2404	Facts & Details	6	6	7	5
2408	Drawing Conclusions	2	10	5	7

1. Number of Students is 12.
2. Grade 5 Students.

The children read in English three days of the week and in Spanish, two days of the week. Psycholinguistically, the literacy gained in each language enhanced the other.

The orientation and training of the Bilingual Diagnostic/ Prescriptive Learning Lab Teacher followed the same pattern as the Title I Program (See page 62).

Supervision of the program was provided by the school principal or the District Coordinator of the Diagnostic/Prescriptive Learning Lab.

Materials consisted of hardware with audio-visual cycles to accompany the hardware and software in the way of texts, programmed readers, skill books, and reading kits. Since the program was not budgeted with monies for the above items, much of the materials were borrowed from the other Diagnostic/Prescriptive Learning Centers.

The instructional methodology was identical to that found in the Diagnostic/Prescriptive Learning Lab (See pages 64-65)

3. Program Objectives and Data Analysis

In reading, the participants demonstrated mastery of the objectives listed in the SED classification index. Stanford Diagnostic Reading Test data have been reported in criterion referenced format. (See Tables 73 - 76).

Grade 2:
- Initial Consonants - 2102
- Final Consonants - 2104
- Word Meaning - 2305

Grade 3:
- Initial Consonants - 2102
- Final Consonants - 2104
- Word Meaning - 2305
- Facts & Details - 2404

Grade 4:
- Initial Consonants - 2102
- Final Consonants - 2104
- Vowels: Single Letters - 2106
- Word Meaning - 2305
- Facts & Details - 2404

Grade 5:
- Initial Consonants - 2102
- Final Consonants - 2104
- Vowels:Single Letters-2106
- Vowels:More than one Letter-2107
- Word Meaning - 2305
- Facts & Details - 2404
- Drawing conclusions- 2408

4. Recommendations

a. It is recommended that the ESL Component be implemented earlier in the life of the program.

b. It is recommended that monies be budgeted to provide for basic instructional materials.

c. It is recommended that the program be re-funded.

5. Conclusions

The Bilingual Diagnostic/Prescriptive Learning Lab program was effectively implemented. Children benefitted on a daily basis and were made to be successful in the classroom setting. Tax-levy teachers were tained in diagnostic-prescriptive techniques and to be aware of matching appropriate level materials with reading levels of children. The school staff benefited in that the reading achievement of its poorest readers rose as indicated by the criterion referenced test results.

Q. Special Primary School 31 (B/E 5045-88758)

1. Description of the Proposed Program

The services of one Educational Assistant in the area of ESL were added to the already existing Title I program. For a complete report, see pages 34 and 35.

2. Description of the Observed Program

For a complete report, see pages 36 to 38.

3. Program Objective and Data Analysis

a. The children in kindergarten to grade 2 made significant gains (p=.05) in English oral language as measured by the Bilingual Syntax Measure. (See Table 77)

The participants included 13 students in grades K and 2. All children were pre-tested during the first week of October, 1977, and post-tested in May, 1978. A t-test for correlated means was used to measure the significance of differences. Data for each grade level has been analyzed and reported separately.

b. The children in grades 3 to 5 made significant gains (p=.05) in English language ability as measured by the Cervenka's Basic Language Competency Battery. (See Table 78)

The participants included forty-four students in grades 3 to 5. All participants were pre-tested during the first week of October, 1977, and post-tested in May, 1978. A t-test for correlated means was used to measure the significance of the differences. Since appropriate normative data was not available, raw scores were used in the analysis of data.

4. Recommendations

For a complete report, see page 4.

5 Conclusions

On the basis of data analyses, site observations, reaction of program staff as well as additional data gathered from detailed interviews, Special Primary School 31 program has been effectively implemented, according to the Impact Aid proposal.

TABLE 77

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Special Primary 31 Program by Grade Level

(Name of Test: Bilingual Syntax Measure
Raw Scores

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
K	6	1.0	0.0	2.2	1.0	2.92
2	7	2.0	1.0	3.7	0.8	6.00

TABLE 78

Comparison of Means, Standard Deviations and t-tests for Pupils Participating in the Special Primary 31 Program by Grade Level

(Name of Test: Cervenka Basic Competency Battery
Raw Scores

Grade	N	Pre-test X	Pre-test SD	Post-test X	Post-test SD	t-test
3	5	100.2	5.4	117.6	7.1	6.16
4	5	101.6	7.0	118.4	6.5	3.18
5	10	106.8	7.0	124.9	8.3	2.04

R. Bilingual Reading Lab for P.S. 161 (B/E 5045-88759)

1. Description of the Proposed Program

The Bilingual Reading Lab Program for P.S. 161 was designed to improve the spoken English of students through an audio-lingual approach.

Students were to attend the Reading Lab (built by Educational Technology twice a week in groups of 15 for a 45 minute period. During this time they would avail themselves of the use of tapes, records, cassettes, (both commercial and teacher prepared) and related worksheets. They were to, at times, record their original works.

The lab was to consist of fifteen individual student carols containing cassette recorders and players. A separate console would enable the teacher to monitor the students individually and in groups. It was to consists of a reel-to-reel player, record player, cassette player and a cassette player-recorder. Transposing from one of the four to another would also be possible.

Along with use of the lab, the students were to be exposed to proper use of English through field trips to legitimate theater, movies, and other educational facilities. These visits were to be followed up with lab activities such as imitation, original tapes, writings, etc.

While the lab was to provide specific direction and instruction, the classroom teacher was to be provided with data and modality to continue implementation. Each curriculm area was to emphasize this approach.

Approximately 185 children were to be chosen from grades 4, 5, and 6. Both teacher recommendation and ratings on the Language Ability Scale (categories C thru F) were to be used to determine selection.

The program was to be staffed by a teacher/coordinator and a paraprofessional.

2. Description of the Observed Program

The Bilingual Reading Lab was a unique pull out program that served two classes in each fourth, fifth and sixth grade levels. The six groups of 15 children each were seen twice a week. They were chosen through teacher recommendations and their ratings of C-F on the Language Ability Scale. Pretesting on the Stanford Diagnostic Reading Test was done in the second week of February and instruction began on April 12, 1978.

The programs objectives were to encourage and improve children's facility in speaking and writing standard English. The methodology of the program was through the use of a fully equipped language lab which allowed the teacher to assign either whole class aural-oral drills, small group drills as well as providing the opportunity to tape record and preserve individual children's work.

Many materials from ESP Educational Technology were utilized. These were tapes, records and cassette drills coordinated with workbooks and ditto master sheets, each

TABLE 79.

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Riling Rdg Lab at P.S. 161 Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2201	Compound Words	16	17	16	17
2205	Syllables	6	27	8	25
2305	Word Meaning	3	30	4	29
2403	Inferences	2	31	5	28
2404	Facts & Details	9	24	12	21

1. Number of Students is 33.
2. Grade 4 Students.

TABLE 80

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Rdg Lab at P.S. 161 Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2201	Compound Words	27	12	29	10
2205	Syllables	25	14	29	10
2305	Word Meaning	6	33	9	30
2403	Inferences	12	27	14	25
2404	Facts & Details	17	22	22	17

1. Number of Students is 39.
2. Grade 5 Students.

TABLE 81

INDIVIDUAL PROFILE SHEET
CLASSIFICATION OF INSTRUCTIONAL MASTERY IN READING
For the Bilingual Rdg Lab at P.S. 161 Program

Name of Test: Stanford Diagnostic Reading Test
Green Level

CODES	CATEGORIES	Pre-test		Post-test	
	Concepts/Skill Domain	Mastery	Non-Mastery	Mastery	Non-Mastery
2201	Compound Words	37	11	40	8
2205	Syllables	33	15	37	11
2305	Word Meaning	28	20	34	14
2403	Inferences	28	20	33	15
2404	Facts & Details	37	11	40	8

1. Number of Students is 48.
2. Grade 6 Students.

concentrating on specific skills. Individual student folders were maintained. Student's original stories were also the basis for many exercises.

Students were post-tested in May using the Stanford Diagnostic Reading Test as well as the N.Y.C. Language Assessment Battery.

Staff consisted of one Lab Teacher/Coordinator and an Educational Assistant.

3. Program Objectives and Data Analysis

In reading (English), the participants demonstrated mastery of the objectives listed in the SED classification index. The Stanford Diagnostic Reading Test data has been reported in criterion referenced format. (See Tables 79-81).

Grades 4-6: Compound Words 2201, Syllables 2205, Word Meaning 2305, Inferences 2403, Facts and Details 2404.

All students were pre-tested in February, 1978 and post-tested in May, 1978. The participating population included 125 students in grades 4-6. The Stanford Diagnostic Reading Test data have been reported in criterion referenced format. Data for each grade level have been analyzed and reported separately.

4. Recommendations

a. It is recommended that the program be implemented from the beginning of the school year.

b. It is recommended that the program be expanded for use in other classes where appropriate in order to ensure full utilization of valuable and expensive equipment that can be used for many different objectives.

5. Conclusion

This Bilingual Reading Lab has been implemented according to the proposal.

It is, however, difficult to determine the program's impact upon students due to the limited instructional time available.